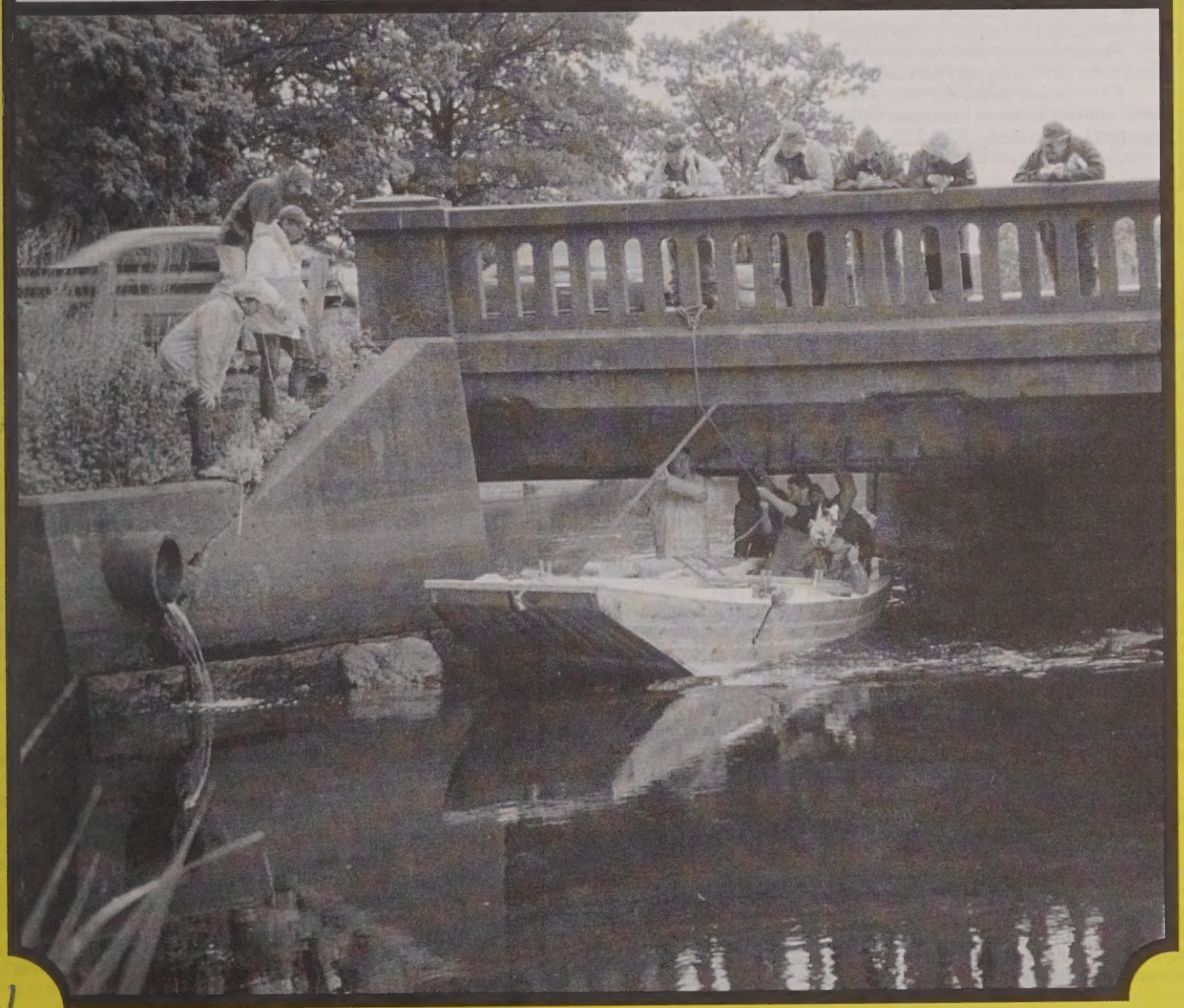
Special Features This Issue
"Build a Boat & Sail to Canada" - "Battle of the Paddlers"
"Return of the Alewife"

messing about in BOATS

Volume 20 - Number 6

August 1, 2002



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BOATS
29 BURLEY ST., WENHAM, MA 01984 (978) 774-0906

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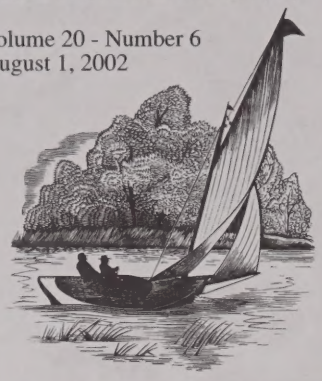


Published twice a month, 24 times a year. U.S. subscription price is $28 for 24 issues. Canadian and overseas subscription prices are available upon request.

Address is 29 Burley St., Wenham, MA 01984-1943. Telephone is 978-774-0906. There is no machine.

Editor and Publisher is Bob Hicks.

Production and subscription fulfillment is by Office Support Services.

Circulation inquiries and problems: contact Roberta Freeman, Office Support Services, 978-777-3557, e-mail: officesupport@attbi.com

Looking Ahead...

If our press deadline permits I will bring you my report on the "Lake Champlain Maritime Museum Small Boatbuilders' Show" which I expect to attend in early July; and I already have dropped by "A Gathering of Queen Mabs" in late spring and have a report on that event also.

John Robinson follows up Hugh Hagan's recent reminiscing in "The String is the River" with his own looking back in "Pirate Island"; Mike Ives tells us all about "Kidney Stones & Cartopper"; Robb White concludes his two part tale of "Two Unliklely Adventures"; and Bill Gamblin concludes his "Looking Back" series with "The Halifax Race";

Wally Foster looks back over a life with "Wally's Collection of Sloop Rigged Canoes"; and Jon Rieley-Goddard tells of his project that was "Born & Built in Buffalo".

Richard Ellison introduces us to his unique sailing pram, "Cygnet"; and Phil Bolger & Friends present "Update on Bantam 2016"; and Alan Glos advises about "Outboards for Dummies";

On the Cover...

Following in the wake of its namesake anadromous fish, the 17th century scow *Alewife* battles her way upstream to a home at the historic Saugus Iron Works just north of Boston. Jeff Hillier and I have six pages of commentary and photos of this saga of recreated antiquity featured in this issue.

Commentary...

Bob Hicks, Editor

I have from time to time on this page remarked on the part that many of you play in making this magazine what it is, with its unique appeal to some of us in today's world of boating who derive simpler pleasures from our small craft than those of the overt consumerism that the mainstream boating public blindly pursues. A letter from reader Bill Marsano of new York City offers an explantion of this appeal"

"I confess at the outset that this Letter to the Editor is written under false presences for it is in fact a Letter to the Readership of *MAIB*, long may it wave. I take as my text the commentary signed by one Bob Hicks, Editor, in volume 20, No. 1. Readers will little note nor long remember what it says there, so I repeat the salient portion: 'I am pretty comfortable with the magazine as it is because I've kept it simple and straightforward and never have been driven to trying wallpaper graphics layouts to hold your interest. Plain vanilla it is. It has been the ongoing support from many of you who provide much of the content every couple of weeks which has been vital to our being able to offer to readers real world stories about messing about in boats well outside the consumer mainstream madness.'

I for one am not much for 'modern'; if you want to know what 'modern' is, try listening to the music. Nevertheless I propose major, even sweeping alterations to *MAIB*: 1: Hyphens ought to be used more often and 2: The free classified ads, so great a service to the boating gang, should absolutely require that the sale price be disclosed. I take it hard that anyone would offer goods for sale without disclosing the price, especially when taking advantage of free ad space. Here let the renovations end.

I have been looking into *MAIB* for a half-dozen years now. When I began it was (as this superannuated gent recalls) a bit clumsily printed and the photos looked as if they'd been carved out of potato blocks. Improvement, in printing quality or my prescription, has been steady ever since, and I take this occasion to ask the readership whether it is aware of what Bob Hicks has achieved with *MAIB*. It is that very rare thing called a 'community of readers', and it is not to be found in the above-mentioned 'consumer mainstream madness'.

It is this community that makes *MAIB* the most dangerous boating publication I know of. I can buy any number of slick-printed two-pound-an-issue mainstream sailing mags from Hearst and the like and be persuaded within minutes that boating is utterly and absolutely beyond my scope of skill or finances. Two minutes with *MAIB*, on the other hand, puts me among friends and co-conspirators and could have me in a boat of my own by season' s end if I don't watch out.

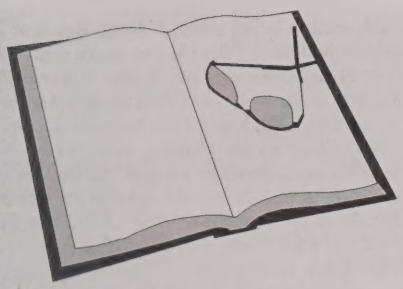
As a 40-year veteran of the magazine racket I know whereof I speak. I have written for several dozen magazines and a couple of newspapers; I have been on the staffs of about six magazines. In the end I ceased dealing with almost all of them because of loathing and contempt: They failed to establish such a community, instead preferring to publish Gold Lists, Top Tens, so-called Readers' Polls and other editorial flim-flam designed to spend readers' money on their advertisers. Let me not seem too idealistic here: I also abandoned those publications because their publishers were obscenely greedy and disgustingly cheap while their editors were almost invariably unskilled, lazy and stupid.

So all of this babbling from your correspondent is to call readers' attention to the very rare community that *MAIB* has created and to encourage them all to acknowledge, share and support it. You will not see its like again."

It happens that at this time I am casting about for ways to increase our readership, to reach out to others who might find what you have on these pages. A major source of new readers is the large number of gift subscriptions many of you buy for family and friends, usually around Christmas time, but also at other times appropriate to your own circumstances, such as birthdays. I am very grateful for this manifestation of that support that Bill mentions.

There is another no cost way you might support our effort if you like, and that is to send me names and addresses of anyone you might know who you think might possibly enjoy the magazine. I will send each a sample copy for them to decide about its degree of interest to them. Those of you on the internet can email your suggestions to us at <officesupport@attbi.com>, which is our subscription fulfillment address. Postcards or notes can be mailed to us at 29 Burley St., Wenham, MA 01984-1943.

Why this circulation promotion effort now? Well, we face ongoing costs of doing business which leave us a narrow margin of net income on which to survive. Building up our subscriber base from its present 4,500 is one way to widen this margin. Our US Postal Service has again jacked up its rates, so soon after the last increase, which is trimming that margin significantly. I gotta do something!



Book Reviews

Essential Sculling

By Daniel J. Boyne

The Lyons Press, 123 West 18 Street
New York, NY 10011
2000, Softbound $16.95

Reviewed by John Hawkinson

For a variety of reasons one often wishes to be 50 years younger, for example, to try out a new way to enjoy being out on the water. This book describes the steps needed to learn the art of sculling, describing it as, "an act of mysterious beauty." Refuting the notion that sculling represents an injury-free, well-rounded exercise program, the book suggests that we "leave any preconceptions about this endeavor on dry land before pushing off from the float."

The author, Daniel J. Boyne, develops the topic of humility in describing his first attempts to row a single scull just after finishing high school. He describes his initial bleeding knuckles and occasional dunking while explaining that in the few years since this modest beginning he has advanced to head recreational rowing at Harvard. He has taught at least a generation of scullers and the book is in part the result of the requests of many of his students. The author quotes many renowned authorities on rowing, blending traditional and current practice.

Boyne's goal was to cover the specific information needed for one to become a better sculler. This led to his further goal, "of trying to express the true essence of the sport, the pure joy of moving over the water feeling unencumbered by superficial concerns." Few row perfectly in the eyes of a coach. There is a level of realistic ability that may not measure up to the coach's expectation. What is important is to find out what works for the individual...are you using your arms and not your legs? Do you have a weak back or some limitation of motion? He points out the similarities in technique between rowing four and eight oared shells and singles. In the single scull, if the solo operator lacks strength and agility or has soreness of back, legs or arms, these shortcomings cannot be masked by group effort.

Whenever two boats share the same water several comparisons are mandatory: Which boat is newer, prettier, better kept, longer, but most important, faster. A speed contest is inevitable. Racing is not requisite, but as a measure of individual ability represents the chance for one to see how he is doing. How is it, the author asks, that some codger can appear in an old wooden scull just ahead of a youngster in a carbon-fiber dazzler and in the course of twenty minutes keep ahead and with no apparent effort make the fledgling rower's actions appear uncoordinated and wasted?

Observation of good rowing technique shows the beauty of a properly executed catch (insertion of oar blade at the beginning of the power stroke) a strong coordinated drive and a smooth release (removal of blade from the water). The most beautiful to view is the delicate 90 degree rotation of the blade (feathering) during the recovery cycle...done properly this looks easy and to the seasoned sculler it is probably effortless, yet the novice tends to "muscle" the feathering motion which will fatigue and may lead to tendonitis. Feathering reduces air resistance and keeps the oar out of the water during recovery while balancing the boat. The author outlines the easy way to feather which amounts to relaxing the grasp and letting the hand open up (avoid the death grip). This may not be easy to accomplish in a livery rowboat even though the oars rotate easily.

Several rowing problems are described with a caution to correct errors before they become ingrained. Suggested critical methods include review of videos to look at movement, posture and position. If one finds a problem, the author includes more than adequate diagnostic insight so that one can understand what the problem is and then by a process of learning or corrective exercise, improve things.

The illustrations show the correct and incorrect position for balance and smooth movement during catch, leg drive, release and finish. If evidence of specific muscle weakness exists, Boyne suggests ways to detect and to correct the problem. Torso training and land training outside of the rowing situation may be called for to cure problems since rowing alone overdevelops some muscle groups and overlooks others.

We all tend to pull with the arms early since use of the hands and upper limbs is more a conscious act than what we do with our legs and feet. There is no substitute for coordination during all phases of the rowing cycle. The legs do most of the work but require a strong back and arms to put the whole thing together.

The theme of the book is that rowing is an acquired skill which evolves with the individual. No method is in itself wrong, but by a process of trial and error each rower discovers a *vade mecum* which eventually resembles the technique of more skilled and successful scullers. In these nine chapters no detail is found missing, and each is a monograph in itself. There is considerable information about boats and boat gear for sculling as well as the rudiments of rigging a boat. The twenty pages concerning technique clearly indicate how to get your oars in and out of the water. That's what we came to find out.

Two Mini Reviews

By C. Henry Depew

Hydrofoil Sailing

Boat speed is usually dependent on either waterline length or horsepower. A WWII American battleship was about 800' long and about 100' wide at the waterline. With the horsepower available, it could run at better than 30 knots since it was shaped like a large canoe.

Another approach is to decrease the immersed surface as much as possible. This approach utilizes the concept of a "wing in the water". Back in the 1970s, the British were very involved in hydrofoil research. Any number of Amateur Yacht Research Society publications reported on the subject. As a result, a book was published that combined most of the basic research into one, very readable, source. To learn more about a lot of the initial research on "flying across the water" with sail as the power source, take at look at this publication:

TITLE: Hydrofoil Sailing

AUTHORS: Alan Alexander, James Grongono, & Donald Nigg

PUBLISHER: Juanita Kalerghi, London

DATE: 1972

Boatowner's Energy Planner

"The battery is dead", is not a good thing to hear on a boat. This is especially true if you need the battery to start the engine. Batteries are used throughout the modern boat to run the GPS, handheld radios, and otherwise supply current to the "house" side of the system. Long-distance cruisers have come up with a number of ways to provide electric power with varying degrees of success.

An initial step for most users is to increase either storage, production, or both. Another approach is to decrease the consumption. Given the limited storage area for fuel or batteries, work has been done with solar panels, wind and water generators, and much more. Some of the better early ideas, that are still applicable today, are included in this soft-cover book:

TITLE: Boatowner's Energy Planner: How to Make and Manage Electrical Energy on Board

AUTHOR: Kevin Jeffrey

PUBLISHER: International Marine/Seven Seas

DATE: 1991

You write to us about...

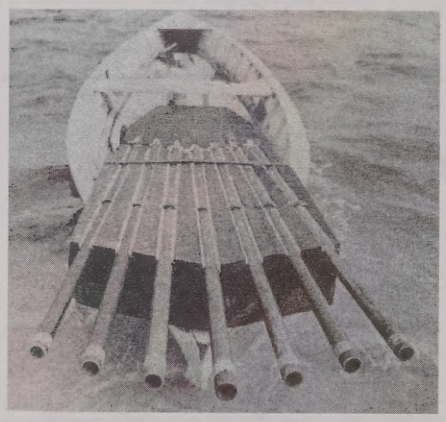
Information of Interest...

Bring on the PWCs

The boat pictured was a common boat in the St. Michaels, Maryland area. The picture is from *From a Lighthouse Window* published by The Chesapeake Bay Maritime Museum in 1991 on page 66. It was used for market gunning, edged up to a flock of rafting geese where the guns were fired off. Another version, which is in the collection at St. Michaels and can be seen in their catalog, is called a "big punt gun"; it had a single barrel, 9' long, more like a cannon loaded with shot, which could fell 70 geese with one blast. The geese wound up on tables from Baltimore to the northeast. The practice was pretty much outlawed by the Federal Migratory Bird Treaty Act in 1918.

The guns in the picture are mounted on a classic Chesapeake Bay crabbing skiff, the type was well documented by Chapelle in several of his works. Today it might make the thoughtless PWC operator think twice about his behavior!

Mike Moore, Burlington, NC



That 10' Geodetic Kayak

I have a copy of an old magazine entitled *How to Build 20 Boats* (I think it is issue #5, probably ca.1942). These books were published each year for a number of years by the Fawcett Publications, Greenwich Connecticut.

In this issue a geodetic kayak, which reader Robert MacKay recently inquired about on these pages, was displayed with plans. It was 10' long, 36" wide, light woden frame covered with canvas. The designer was one Norman Mayer. I inquired of Mr MacKay if this was what he wanted to find, and offered to copy the plans for him if so. I have often thought about this project but never taken it on.

J.P. Edwards, Danbury CT

Opinions...

Most Unusual Article

"Dinghies Part 1" is the most "unusual" article I have ever read about dinghies. It is my understanding that a dinghy is a device for getting to and from a boat. Accordingly, it doesn't even have to be a boat. I have seen sailboards and ocean survival suits used as dinghies.

As to my qualifications to speak of such matters, my wife and I lived aboard a 32' Westsail for years and wandered about. I owned quite a few dinks in that period of time. Unfortunately, we are ashore now with health problems.

In my humble opinion, there is no such thing as a good dinghy, there are only least bad dinghies. The characteristics that one desires in a dinghy such as load carrying capacity and the ability to travel long distances are also the ones that make it the least desirable for passage making. Both of these characteristics seem to be of primary importance to Mr. White.

It is my belief that the most important characteristics are how well she stows and how well she will row out an anchor. It is important to be able to get her off the deck and filled with an anchor and rode either to set another anchor in a blow or to stop the boat from going further aground when you miss a buoy or just poke in too far.

To this end a light fiberglass 6' dink that will carry a 3 or 4 horsepower motor seems the less bad. A rubber dink is a joke. A big boat with a big motor just takes too much room on deck for the boat, motor and lots of gasoline. To assert, as Mr. White does, that it is satisfactory to tow a 16' length 5' beam with a 9.9hp motor is simply ludicrous except on the smallest of excursions. I have no idea how you would get the thing on board much less how you would live with it on deck once you got her there.

Most sailboats making passages average 100 to 125 miles a day. Towing something like that would so drastically slow you down that I guarantee you that the crew would mutiny and cut it adrift.

Yes, I have overloaded our small dink with too much food, water and people. Did so in Darwin, Australia where you have to anchor way out because of the tide and bottom. Yes, I have towed her and had the wind blow her airborne and snap the towline. Did that in Greece. Yes, I have done all kinds of terrible things with her, to her, and her to me. I never said she was good, only less bad

If your boat goes down midway across the pond, the 16 footer would be much better than 6 footer, there is no doubting that. However, much as I regret to say it, if the boat goes down you are probably going to die. Yes, I have read ALL of the survivor books and am especially aware of the Dougal Roberston saga. When you read all 25 or so books you must remember all of the people who do not write books because they did not survive. In Hawaii, every year boats show up with NO ONE aboard them. If you are going to abandon into a dink, or even a raft, perhaps you should get into her and let the boat sink from under you after you have tried every desperate measure you can think of to save her.

While we were wandering about, I saw several nesting dinks that were designed by Danny Greene. They are about 10' long with each section being about 5' long. Because I'm ashore just now, I decided to make one. It is a first-class rower and my 3.5hp motor moves it along quite well. However, it does take a bit of time to launch and bolt the two halves together. It stows quite nicely in about 5'. Next time we are able to go on an extended cruise I hope to give it a good shakedown before I decide to give up the 6 footer. Much as I like the 10 footer, I don't like the idea that I can't launch her very quickly.

Frank A. Butler, Opinionated Sailor, Westsail 32 #0825 *Intuition*, N. Charlestown, SC

Outboards Like Politicians

Robb White's advices warrant No. 1 attention. *MAIB* June 15, 2002 p.26 delineates 2-cycle outboard motors' many shortcomings. My viewpoint is these old-timers are like our political representatives, not necessarily the best but perhaps the least bad. Problem is, like with recalcitrant wives, what is the alternative? I'm a hobbyist wrencher and casual maintainer of things so develop quick & dirty solutions.

Disassembling an ailing outboard is the last thing I do. Make up a socket for the magneto head, add some great solvent like Gumout, and remove the plugs and spin the heck out of the thing with a 3/8" drill. Then, how old or stratified is the gas and oil (petroil) mixture, providing even special 2-stroke oil is being used and not SAE crankcase drippings? Or, shake up the fuel can, or wobble the outboard on its bracket to enable mixing necessary for ring compression.

Then, the all important spark plug, was it recommended along with its heat range or just some pickup item? With a dirt bike I selected the hottest plug I could find and renewed it every 20 hours or at a cost of $1.50 for the interim pleasures. And if Robb's "cute old fashioned looking" refer to the WWII Seagulls, I couldn't agree with him more, except they're about the only game in town. Air cooled outboards solved many problems, but were most additive to the helmsman's breathing atmosphere.

If anyone has a copy of John Steinbeck's *A Trip to the Sea of Cortez*, in it Steinbeck denotes extremely funny unperformance of a "Hansen Sea Cow", not wanting to upset the largish Johnson/Evinrude organization. Conversely, in earlier days on a lengthy trip down the Baja Sea of Cortez they encountered almost insurmountable problems with the fuel filter clogging. Out of desperation, they removed the filter and experienced no more problems.

The petroleum industry has thrown us a couple of curves with leaded and nonleaded fuel to learn about, but I've found the new synthetic oils are great, not some by-product up the fractioning tower to bleed off and sell. In restoring one old "Hansen Sea Cow" the oscillating ignition points were out of stock or virtually unaffordable. How I wished I had the know-how to plug in current from outside dry batteries that'd give immediate full spark.

I've not tried those small cans of pressurized ether used for starting diesels. I assume there will be an explosion somewhere and hope it is "friendly". I'm looking foward eagerly to Robb's continuations, telling it like it is.

Norm Benedict, Santa Maria, CA

Yes, Atkin Was a Genius

By Robb White

We launched the Rescue Minor June 20th and she ran most marvelously. There was no ceremony to it. My wife and infant redheaded granddaughter and I just wheeled her down to Lake Iamonia about twelve miles down the road and untied the jackleg lines that held her on the trailer and she rolled off into the water.

The boat sits about an inch and a half down by the stern at rest but it is actually that she is up by the bow.... the toe of the stem is right at the water. It is because the boat is so light. I knew it would be like that and hoped it wouldn't be worse. When my wife and the baby got in up in the bow, she sat right down where she belonged. I hadn't brought the engine house, so, when we fired her up, she cackled pretty loud (about like a Kubota tractor) but didn't vibrate or shake the boat at all. While she was warming up, I checked all around to see how much exhaust water the little Shurflo diaphragm pump I adapted to run off the camshaft was giving (plenty) and what the oil pressure was and all. I think I was a little scared to put the power to the wheel and see what was what.

As soon as the propeller began to revolve, the stern picked up what felt like three inches and the boat began to move much faster than I would have expected from any planing boat at dead idle. Lake Iamonia is one of those lily pad lakes we have down here and there is only a narrow trail through the bonnets out to the clear water in the middle and I had fooled around looking at the engine and let us blow off so that we were heading for the lily pads but just a hint of rudder brought the idling boat right around. I have never seen an inboard boat turn like that.

There ain't no idle zone, so I ooched up on the throttle a little bit and the boat picked up speed just like a regular boat. I gave her a little more and she gave me a little more. I ran her on up and she ran on up. There was no perceptible rise to the bow at all and the wake never changed. The little engine smoothed out so that it was hard to detect any vibration at all when I put my hand on the cylinder head to see if she was warming up or not. The boat steered so stably that I could hold the tiller and walk all around the engine to check on my doings. Which, the copper tubing wrapped exhaust manifold ran cold and the inlet pipe from the keel-cooler stayed cold. There were no oil leaks and no hint of a diesel fuel stench or exhaust but I did have a damned tiny coolant leak from the plastic overflow reservoir. The outlaw graphite-ceramic well pump shaft seal never gave a drop and the belt-drive transmission ran smooth as all get out.

Which, I hope I ain't ruined my credibility too bad. She ran 18.6 knots on the gps and that with the 10" pitch propeller that I put on there to make sure I didn't lug the engine while it was breaking in. That wheel let the engine run up to where the governor backed her offat 3,600 rpm. Me and Atkin think she 12-1/2" of pitch and I have that prop standing by ready to put on there. You know, I have the jackleg push-button prop nut and can change wheels by just reaching up under there with one hand. As an aside, that's a wonderful rig. I can take the propeller off a sailboat while she is luffed up in the mouth of the river. I wish I could lay claim to the invention, but it ain't nothing but something like a quick-disconnect like on a garden hose.

The boat ran most marvelously. I would have been satisfied with 12-1/2 knots (my speed) and a slightly tender feel (about like a deep "V") but the boat was so stable that my wife and I could hardly alter the running trim by both us, and the baby, sitting on the same side. She turns about level and, even then, weight distribution doesn't seem to affect the trim. I think the dynamics of the hull that control the wake hold the boat in a tight grip. It feels like it weighs about 10,000 pounds. There was never much wake at all but, like Alex's, there was a sporty looking rooster tail erupting about 8' astern. I have a little clamshell water pickup right behind the prop to give a little supplementary exhaust water at speed, and it is mighty effective (I could probably eliminate the engine-driven pump). The beautiful exhaust-water rainbow around the rooster tail made a most charming sight.

All my fears are put to rest. She ain't tippy at rest and she don't rise up by the bow and try to skitter off on that little pirogue she carries on her belly. I couldn't make her cavitate to save my life and the boat will turn, at speed, shorter than any outboard boat I ever had. I tried to make a wake to run back across so I could see what was what with that, but the boat doesn't make enough wake for a valid test. I ran across the wake of an aluminum butt head-skiff with a nine point nine that was much bigger than the wake of the Rescue Minor. I don't need no wake in no lake to tell me how she'll do in rough water. I know a sea-boat when I see one.

It is a wonderful boat and, as Alex said, "Atkin was a genius".

Battle of the Paddles: 2002

By William Mantis

It wasn't until one week before Battle of the Paddles, that Roy and I gave any thought to producing a boat to enter the race. Roy Hendrickson lives a few hundred yards south of me on the northern tip of Pine Island, Florida. He and I make a point of criticizing one another's work. Since he does more work, I tend to do more criticizing.

The rules governing the construction of "Battle" boats were a model of simplicity. The boat and paddle (or oars, etc.) had to be built using the following materials only: One 4' x 8' sheet of quarter-inch plywood, two two-by-fours, one pound of fasteners, one roll of duct tape. No glue was allowed, and no paint below the waterline where it might be used to cover unauthorized construction methods.

Roy has probably built a dozen boats in the course of his life; a few of them were of his own design. He calculated that between us, we had far more knowledge of boat design and construction than the average bar patron, the talent pool from which we expected our competition to be drawn. Visions of wealth and fame danced though Roy's consciousness: the last race of this sort held locally had paid $1,500 to the winner, and $500 to second place. I was more skeptical. I thought our victory was far from a sure thing.

Besides, why spend the time and energy to build a boat that would be used once, or at most, once a year for a few years? Why not spend a little more time and money and build a boat that would provide years of continuous service? On top of these considerations, we had yet to learn the size of the purse. Since the race was being held to benefit youth baseball programs, the organizers were not likely to be generous.

Roy had little interest in proceeding on his own. He had not recovered full agility since hip replacement surgery a year ago. So my participation was critical; I would be the paddler.

What followed was a series of hard-headed negotiations. Who would pay for the materials? Who would go to pick them up? Who would pay the $20 entrance fee? How would the winnings be split? Who would get the final say as to design, in the very likely event that we disagreed? Since both Roy and I are tight with a buck, we lost a couple of precious days to the negotiation phase. Time was getting short.

Meanwhile, our inexperience was becoming painfully apparent. How do you create a watertight seam with duct tape? What is the minimum freeboard you can get away with? How much can you bend or curve quarter-inch plywood before it snaps? Along which axis will it curve more easily. Would lauan bend more readily than fir? Is it easier to persuade it to take a curve if you score it? How deep to score it? Could you soak a piece of lauan, made with interior glue, and get it to delaminate? Would the individual laminations then be usable? Or would the whole thing disintegrate? What is a fastener, anyway: Staples? plastic ties? Where do most boats fail: Leaky seams? Getting swamped? Capsizing? What is the nature of the course we would be designing for: Long? Short? With turns? How many? How many heats would the boat (and aging paddler) have to endure? What kind of waves and boat wakes would we have to contend with? The clock was ticking, and we had raised some five years worth of questions to research.

If we wanted a boat guaranteed to be speedy, we would want to incorporate either a long waterline or U-shaped sections to minimize wetted surface. Better yet, we would want both. But high-performance construction would also be a high risk proposition. We could spend a lot of time building, only to find that the end product would not work. Then, one of us would have to go out and buy another sheet of quarter-inch ply, an eventuality that would involve further time consuming, rancorous negotiations.

Given the time press, conservative was the way to go. Don't try to push the design or construction envelope; better to build something we could be fairly sure would stay afloat for the duration. I believe it was Woody Allen who said, "Ninety percent of life is just showing up." A similar rule holds for a Battle of Paddles: Ninety percent of it is just crossing the finish line.

We did a couple of torture and delamination tests, and we cut out a half-dozen graph paper models before finally admitting that there was just too much we didn't know. Having given up the ghost, I took a peek at the entry my neighbor, Dick Grimes, was working on. Dick had done his homework. He had entered two races previously and had clearly benefitted from the trial and error process Not to mention, he weighs a youthful 150 pounds, and he is a determined, aggressive paddler. I informed Roy that it was just as well we quit when we did. No way could we have brought home a first place.

The first "Battle" boat Dick built in 1998 was a seven foot dory; about what one would expect to produce from a single sheet of plywood. It was good enough to garner a third place. But Dick calculated that in order to win, he would need to build a longer boat. Three years elapsed before the next race materialized. He had time to prepare.

This time Dick built a flat-bottomed twelve-footer. He was surprised to find, in the course of the race, that water came in over the stern; not, as one would expect, over the bow. Whether the kayak squatted as it picked up speed or whether it got pooped by its own stern wave, the phenomenon had to be allowed for in the future. Dick's 12-footer won him a second place and $500. First place was won by a 16 year-old high schooler who had entered a number of competitive kayak races in the past. For this race, he had built a sixteen-foot flat-bottomed, open kayak. Dick figured he would have to do likewise.

In anticipation of the Battle of the Paddles, 2002, Dick tried to duplicate his young adversary's construction. The resulting kayak proved to be extremely unstable. Dick trashed it and went back to the drawing board and to the library to consult the authorities: Chris Kulczycki, Ted Moores, et. al. He examined the various panel shapes that kayak kit makers produce. And he made a series of cardboard models. He settled upon a V hull.

He cut four eight-foot-long panels that tapered from 12" amidships to about 8" at the bow and stern. At bow and stern, the angle described by the side panels is approximately 60 degrees. The panels twist slightly as they

Top Banana and *Bare's Tanning* get away in the final, a demonstration of the advantage of a long waterline.

Bare's Tanning leads *Just a Cough'n* in their elimination heat moments before the latter capsized.

proceed amidship where they join at about ninety degrees. The result is a hull with a very sharp entry, but with sufficient beam for ample interior volume and carrying capacity. At bow and stern, freeboard is adequate. Amidships, it's marginal; 1-2 inches. Figuring that water would be most likely to enter in this area, Dick fashioned a duct tape deck or splash skirt over the central area of his kayak. To assure the deck's integrity, the tape was doubled; lapped with sticky sides facing one another. Dick started in the center and worked forward and aft until he had used up his roll.

But before fabricating the deck, the seam at the keel, running the length of the kayak, and the deck's structural components had to be engineered. Here is where the two-by-fours came into play. Dick was merciless when it came to ripping them down. Nowhere on the kayak did any full-dimension two-by-four appear. Most of it had all been sliced into one-by-ones or half-inch lattice. A ripped two-by-two was set aside for the shaft of his paddle. For the keel seam, Dick twisted a duct tape rope to serve as caulking or bedding compound. He put a piece of lattice on top of that and stapled the bejesus out of it. Since he had learned not to trust the bond between duct tape and plywood, Dick also added staples wherever the two joined. Contrary to both his expectations and conventional wisdom, his V hull was infinitely more stable than his discarded, discredited flat-bottomed version. So much for conventional wisdom.

Dick made a couple of two-by-two crossbucks which he screwed to his cartop carriers. These made a nice, snug bed for transporting his boat. Having suffered sufficient embarrassment the last race, Dick's wife, Cathy, vetoed the name *Whistling Pussy II*. Dick settled on a more prosaic *Top Banana*, consoling himself in the knowledge that the new name makes for better press releases, anyway.

The race was held in the wide, heavily traveled canal behind a popular restaurant and bar in St. James City. As they pulled into the parking lot, spectators were greeted by *4-Q-2*, a boat that had been a participant in the first historic race of its kind. Although that first race had occurred only eight or nine years earlier, the collective memory of that and subsequent races was vague. Two of *4-Q-2's* builders were on hand for the present event. A third had died. It was not clear what had happened to the fourth, Bob "somebody with an Italian last name." Bob Whomever had been about seventy-years-old at the time. Since he had some knowledge of construction, not to mention the essential table saw, the others elected to make his garage *4-Q-2's* birthplace.

Dick Grimes, working alone, had built *Top Banana* in six to eight hours. The construction of *4-Q-2*, involving as it did the collaboration of four men, reportedly took quite a bit longer. The name was chosen as the preferred method of saluting opponents, as in: "Four Q Too, buddy."

The race course was 80 yards total; 40 yards up, round a buoy, and 40 yards back. Boats were randomly assigned in pairs, the winner of each match-up proceeding to the next round, the loser was eliminated. Seven boats entered. Each boat was unique. Every imaginable hull shape was represented, as well as a couple of heretofore unimagined ones. Except for *Top Banana*, all boats were eight feet in length or less. Judges scrutinized them to make sure they conformed to the construction guidelines and to assign one the "Best Looking" prize. The best looking prize winner, named *Knot a Yacht*, was built by a retired telephone repairman. He had opted for a conventional motorboat design with a sharp entry and a square transom. The boat's widest point, twenty-five inches, occurred at the transom. Delicate stencils of marine life decorated the 12" high sides. *Knot a Yacht* had been bottom-coated with duct tape.

Bottom Hugger was skippered by a 14 year old boy. who had built the boat with the help of his uncle. This boat adopted a scow or barge shape. The rectangular stern transom was plumb, while the bow transom was angled at 45 degrees. Beam was 24" along the entire length. Sides (which were plumb) were 12" high.

Pocket Rocket was unique in many respects, none of which were to its advantage. One critic opined that it had been "designed to carry a keg". *Pocket Rocket* was built in the shape of a pentagon. At 40", its water line length was less than its width (41"). It carried two skegs, keels, bilge boards or watchamacallems that increased the boat's draft by at least 16". It was was decorated in a patriotic theme; American flags (or derivations thereof) were prominent.

SS Barbie, named for Barb's Produce Stand just up the street, would probably be considered a broad-beamed, flat-bottomed canoe. Since the sides were convex, the chine logs could not be continuous and consisted of short 4" lengths of two-by-two. These were spaced; perhaps as much as one inch separating one from another. Nevertheless, *Barbie* experienced no leakage in the course of the afternoon. The trick to creating water-tight seams, according to the builders, was to bake the completed boat in the hot sun to make sure the duct tape adhered.

Bare's Tanning was the only entrant to sport a solid deck and cockpit coaming as well. Its builder had introduced a gentle curve into both the bottom panel and the deck. The boat looked like a miniature version of what manufacturers call a sport kayak or day tripper.

Just a Cough'n, an unlikely looking craft, came close to living up to its name. It lasted only ten yards into its first heat before capsizing. This despite the fact that it had the largest keel of any of the contenders. In theory, the keel was to aid stability. If anything, it had the opposite affect. So much for theory. *Cough'n's* problem, in all likelihood, was its narrow beam. Having an inexperienced skipper added to its difficulties. The boat's construction, nevertheless, bears mention. Wherever possible, the builder avoided cutting the plywood through. Instead, he scored the material to half its thickness, using two passes of the saw to double the width of the cut. He was then able to fold the plywood along the cut to create a leak-free joint.

The diversity in hull shapes made for an interesting race. It would also have been interesting to solicit predictions on which boat(s) would win. Many people, I suspect, would have been able to predict quite accurately. In general, if a boat looks fast, streamlined, and like it means business, it probably is, assuming, naturally, that the power plants are equal.

Without going into all the details of who beat whom, by how much, and in what heat, let's simply say that *Top Banana* paddled away from the competition. *SS Barbie* placed second. *Bare's Tanning* swept to an easy victory in the consolation heat. *Pocket Rocket* ran dead last by a considerable margin, unless you choose to include *Just a Cough'n* in the analysis. *Cough'n* entered only one heat, which it wasn't able to complete. In actuality, *Bare's Tanning* was probably a faster boat than second place *Barbie*, but *Tanning* had been eliminated from the running by *Top Banana* in the first round.

Since Dick Grimes was the only experienced paddler in the crowd, the question remained: Which deserved more credit for the victory; the boat or its motor? Fortunately, for those of us who are kept up nights contending with such burning issues, two competitors sought to answer this very question. After the close of the formal race, Dick Grimes and Gail Bare exchanged boats and paddles. Dick, now in *Bare's Tanning*, trounced Gail in *Top Banana*. By Dick's estimate, he was able to paddle 120 yards in the time it took her to do 80.

Everyone will take away a different lesson from an event. These are the conclusions I drew from Battle of the Paddles, 2002:

A good boat is not enough to guarantee a win; it also must be well handled. C. A. Marchaj, who has researched aero and hydrodynamic phenomena ad tedium, makes the same point with regard to sailing: The perfect boat, if poorly skippered, will be beaten by her well-handled inferior, virtually every time.

On the other hand, there are some features of a boat that may eliminate it entirely from the running. For one, the boat has to have some minimum measure of stability, as *Just a Cough'n* so clearly demonstrated. For another, a square transom that drags water turbulence behind is almost certain death. No pulling boat or sailboat designed in the last couple of centuries has had a square transom that is partially submerged. To be successful, a low powered boat either has to be double-ended, or it has to have sufficient rocker in the keel so that the base of the transom stands above the wa

Bare's Tanning has nice lines, but again short.

terline. The three fastest boats in this race were double-ended. Two of these were skippered by women, who laid no particular claim to superior paddling skill or body strength. The bottom three finishers were all skippered by males. All three had square transoms.

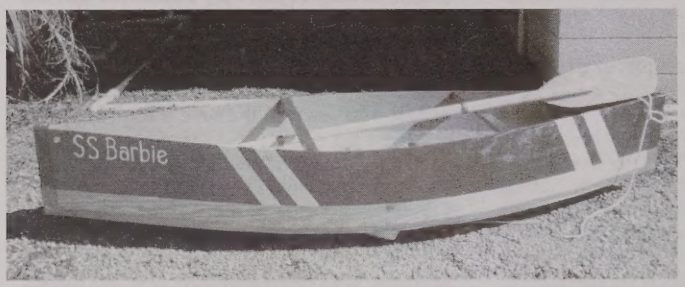
The ideal boat will vary with circumstances. If the race had been a long straightaway, *Top Banana* would have had an even easier time winning. But *Banana's* long keel made her hard to turn. If the course had consisted of a series of small f~gure eights, *Bare's Tanning* would have won.

The ideal boat will probably be personalized. It will take into account the skipper's weight, agility, sense of balance and strength. There was nothing in the race to encourage this conclusion, I just wanted to slip it in, despite the absence of supporting data.

A competition of this nature is a wonderful idea. It calls for demonstrating skills in a variety of areas: Design, construction, boat-handling. And it demonstrates how much can be accomplished on a limited budget, using low tech methods. *Top Banana*, one suspects, would fare very well against professionally designed kayaks purchased at almost one hundred times her materials cost.

The race's venue, though unfortunate, is probably inevitable. To me, paddling or sailing is a quiet, meditative experience; entirely at odds with the party atmosphere of the typical sports bar with its smoke and noise. The bar ambience is not conducive to the sober assessment of the relative merits of various watercraft, or the sober assessment of anything else, for that matter. Unfortunately, only a sports bar, or its equivalent, is likely to realize any financial gain from sponsoring a race such as this. People are not likely to participate unless there is prize, and the prize money has to come from somewhere. That doesn't prevent one from wishing it were otherwise.

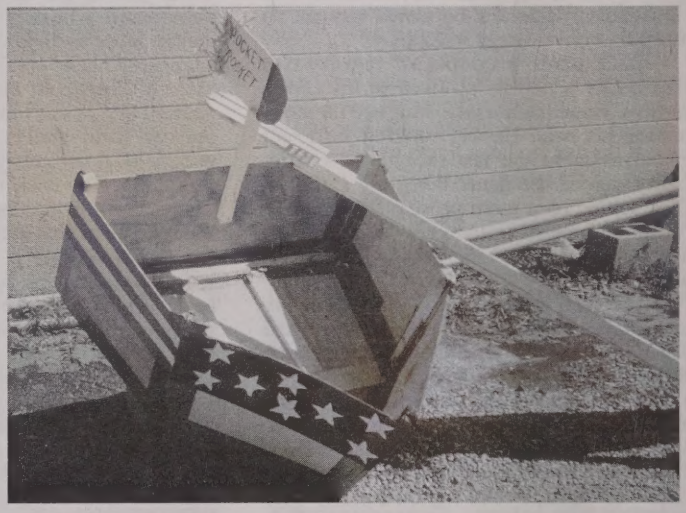
(Bill Mantis is author of *The $50, 5 Hour Canoe Sail Rig*. He can be reached through his web site www.Mediterranean Avenue. com)



SS Barbie, a nicely done up double ender, but short.

Knot a Yacht was derived from the outboard skiff concept, a real tail dragger.

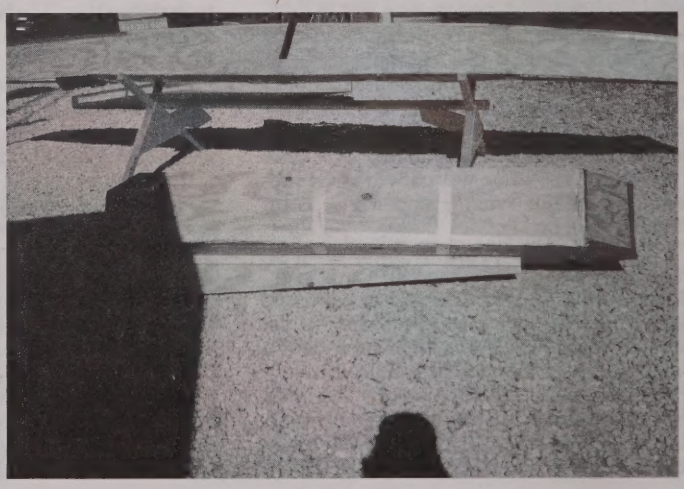
Top Banana arrives on top of its transport.



Pocket Rocket was based on no known hydrodynamic principles.

Bottom Hugger featured transoms on both ends, ala scow. More drag.

Just a Cough'n on its side showing keel, which did not stabilize the ultra narrow beam enough to prevent capsizing.



Swan at anchor on the Maine coast.

Osprey, Sunlight, & Schooners

By Paul Follansbee

(This is why, despite the distance, the rocks, the cold and the fog, I like cruising in Maine)

It's late on a mid-August afternoon; light haze, soft sunlight, breeze from the southeast about 12 knots. Quiet. We're anchored in a shallow cove, part of Pulpit Harbor, on the island of North Haven. I'm sitting in the cockpit, lazily reading a book by a guy who spent a year observing osprey on Cape Cod. In the chapter I'm reading he's describing his frustration at waiting for more than four months in the hope of actually seeing an osprey dive and catch a fish. Apparently these dives are unique; osprey are the only fishing hawk that immerse themselves fully in the water when they dive, hitting the water at speeds of up to forty miles per hour.

Hmm, I muse, that would be something to see. Too bad I don't have four months; I put the book down beside me to gaze around the harbor. Absently, I notice a large bird, looks like an osprey, I think. Suddenly it hovers about 100 feet above the water, wings flapping, staring down. Just as suddenly, it tucks its wings and dives like a fighter plane. Its impact on the water is like that of a cannonball. I realize that I've heard this sound before without knowing what it was. Its head reappears above the surface and with a mighty effort it lurches up out of the water, struggling to regain altitude, with a large fish clutched in its talons.

As the hawk ascends, it deftly shifts the fish so that the fish's head is forward facing, improving its aerodynamics, and with a cry of triumph flies to the upper branches of a tall pine tree overlooking the harbor. Spectacular! I shake my head in wonder. And to think it took that poor guy four months of diligent observation on Cape Cod to see that. He should've come to Maine.

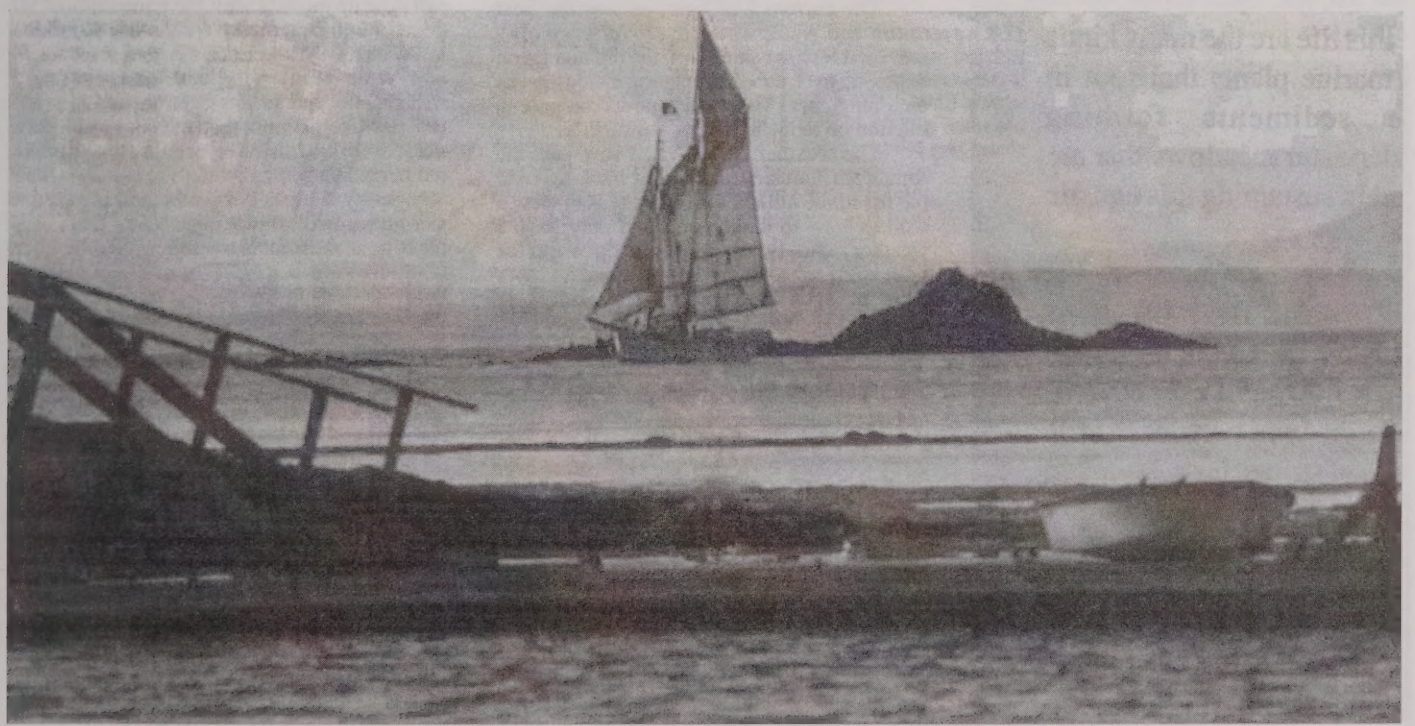
Still in a state of wonder at the osprey, I look out toward the mouth of the harbor in time to see a gaff rigged, topsail schooner, backlit by the sun, tack in close hauled past imposing Pulpit Rock, which guards the harbor mouth. Beyond the schooner I can see the grey-blue Camden Hills, seven miles west across Penobscot Bay. The schooner is the *Timberwind*, which we consider the prettiest on the bay, and not just because our daughter is first mate on her.

The *Timberwind* was built in 1931 (the same year my mother was born) spending many years, summer and winter, off Portland, Maine, before joining the charter fleet. Deep, and heavily built, she is the real deal. I marvel at the skill with which her captain and crew handle the 90,000lb, motorless vessel, guiding her effortlessly through the narrow entrance under full sail. Her headsails come down in a rush, the foresail is backed to slow her, its peak "scandalized", and the anchor is let go with a clattering of chain. Ever so slowly she settles back, the heavy canvas mainsail gently flapping in the breeze, the American flag at her topmast snapping in the breeze against the blue sky, the flags of Maine and Nova Scotia at her foremast and cross trees.

Across the water I can hear the Captain shouting orders: "Let go the throat, let go the peak, drop the line." The sun sinks lower, silhouetting the schooner, her masts and shrouds standing out in bold relief. I think I can see my daughter out on the bowsprit, although at this distance I can't be certain, furling the headsails. The sun touches the mountain tops and a man on another boat plays *Amazing Grace* on bagpipes. The breeze drops away to nothing. Gulls work their way across the darkening sky, a pair of osprey soar, and terns dart. In the distance I hear a loon.

Where else but Maine? I haven't done a thing, haven't moved an inch, but I can't imagine a better afternoon. In the cabin Debbie is cooking supper. I can smell garlic wafting out of the hatch, and something good is bubbling on the stove. We're five hundred miles fiom where we live; why does it feel like home?

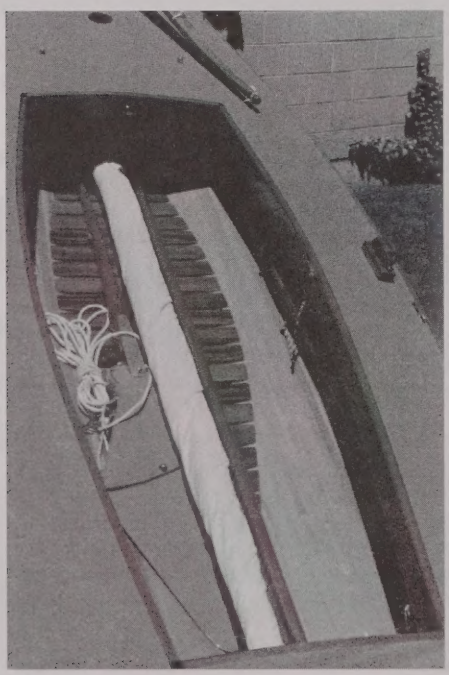
Timberwind arrives in all her glory.



Goat can stand on her own.

Jib is attached to sprit from cockpit rotated ahead from lines aft end, or abeam for wing-on-wing with dog's help.

All is stowed.



Build a Boat & Sail to Canada

By Fred Plouffe

Having spent the last fifteen years paddling, building, or repairing canoes it was time for something new; a sailboat? After seeing a Melonseed, we sent for plans. Studying them I felt that changes could be made to gain more space in the cockpit. The end result was a strip built version 13'8" x 4'10" x 6", with the daggerboard removed in favor of twin bilge boards shock cord loaded and angled out 12 degrees, the trunks being under the side decks. With the daggerboard removed, a cockpit 6'9" x 2'10" was achieved with 12" side decks. The original rudder flush with the keel was hinged and shock loaded also for a depth of 2', to be used in either position.

The sprit sail was increased from 54sf to 82sf. A pair of 7.5' oars and a wooden storage box/seat with cushion top made for auxiliary power. A one person tent with the floor split down the center and with both ends open, reached to the side decks for more space inside when set up on deck. It extended 2' onto the aft deck and 3' forward.

Now where to go from our western Massachusetts home? The Hudson River, Champlain Canal and Lake Champlain were chosen and charts obtained. I would go as far as my two week vacation and weather allowed, with my wife Nancy to pick up me and the *Goat* at journey's end.

Day #1: The start was at a local boat ramp in Waterford, New York, where the Erie Canal joins the Hudson River. By 8am on the last day of June we were off with food and gear secured under the decks, a small cooler holding drinks. Nancy and our dog would take truck and trailer to to Lock #4 on the Hudson to check our progress in the river current, my having only been on small lakes before.

The current was light, as was the boat traffic and wind, which made for easy rowing. First lesson came soon, the red and green bnoys are to be observed, cutting inside a green on a long curve finds one's new oars getting traction on ledge 8" below the surface.

The weather is good as I row past the somewhat industrialised canal banking over the first three miles. Soon Lock#1 is in view, I wonder how to make contact, I only have a weather radio. But the gates are open and the light is green, so in we go, there are no other boats in sight. The operator is friendly and helpful. I secure as instructed and up we go with no problems as our pit crew watches.

Goal for the day is just above Lock #4. All goes well rowing at about 3 statute miles an hour. None of the normal S-SW winds arise. I've learned to point the *Goat* where I wish to go by looking ahead, then quickly looking over the rudder to find two objects to form a range astern, keeping the wake straight. Twelve statute miles and four locks made today a good start. I used statute miles for the entire trip as that is what the river and canal charts used.

Day #2: Nancy is on hand again today with her racing canoe, she will go up to Lock #5 above Schuylerville and paddle down until we meet, she gets bored just watching. It's 14 miles between Lock #4 and Lock #5. The weather is the same 70 degrees+ with a spotty south wind. Today is our first encounter with a large power boat, it doesn't slow. I put the *Goat's* bow straight into the oncoming wake, it rides over easily, staying dry. I was glad it happened, observing the *Goat's* reaction, and it was kind of fun.

Nancy and our dog come into view about six miles up, I whistle and the little dachshund is up looking around with her front feet on the gunnels, making Nancy's ride more challenging. After pit crew checks on our well being, they turn upstream paddling at nearly twice our 3.5mph speed, who's checking on them? The river is nicer now with houses spread apart along the west bank. There are a number of sand bars where it would be easy to stop and camp.

The Rt. 29 bridge at Schuylerville is passed under with Lock #5 a mile above. The lock keeper wants the *Goat's* registration number as others have, again I explain the boat is home built with no engine, so he enters "Small Blue Boat" in his log. There are no lock fees for unpowered boats, I feel funny having tbem operate the locks just for the *Goat*. The plan was to stop above #5 but the weather is fine and so are we, it's only a little past noon.

We head for Lock #6 six miles further with Lock #7 in mind in a further seven miles. Arriving at Lock #6 in about one hour forty minutes, I haven't been keeping time but want to see what I could do after more than half a day rowing. The current is almost non-existent. The wind comes south at 10+ to help the last mile to Lock #6. The keeper asks if I mind waiting five minutes, there are two power boats coming behind us. I wait gladly, time to eat and drink and rest a little. The two boats come in to be raised together, it's our the first time in a lock with others.

We let them pass ahead of us, the south wind taking their exaust with them. The wind is getting stronger but not steady enough yet to sail in the narrow three mile cut north of Lock #6 bypassing a rocky part of the river. I can see wind in the tree tops, we hurry to get out of the cut. Yes! wind 12+ from astern, the sail now up quickly with the boom almost 90 degrees out to starboard for the last 4.5 miles to Fort Edward and Lock #7.

With steady wind and the river fairly straight, the rudder has been in the up position drawing no more than the boat acting as a skeg. Both boards have been in their trunks reducing drag while rowing. The rudder is held straight by a shock cord stretched across the stern deck, with figure eight knots tied close together in the middle section. Under the tiller 6"-8" forward is a small bronze jam cleat to hold the tiller in the desired position by engaging between two knots. When then rudder is set amidships for rowing, the boat will track straight, the shock cord allowing the rudder to move as needed when turning then back to straight.

Also under the tiller is a clam cleat 4"-5" aft of the hand end that the main sheet can be put into under steady conditions. The *Goat's* sprit sailw/boom is sheeted through a block on the rudder head then foward where it can be held with tiller hand and adjusted with free hand. With sheet and tiller set and seat moved aft to sit facing forward the remaining miles to Ft. Edward were made by leaning the boat to steer, at almost 4mph. Lock #7 is 37 miles from Waterford, making 25 for the day, more than expected. I enjoy rowing and sailing even

more, traveling at a pace to look at everything, talking to people as I pass by with no time to be at a destination. A good day!

Day #3: We depart from Ft. Edward back down stream to Lock #7 where the canal cut starts, a little more than a half mile, to be there at 7am opening. It's now after 7 at the base of the lock with its gates closed and red light on. After blowing a whistle for five minutes, I tie the *Goat* alongside and climb the grass slope to the top of the lock. The two lock keepers are found in the control house at the north end. Back at the south end they look over at the *Goat* and it's the registration routine again, its logged as Blue Boat.

The lock is full of water, I'm told to move away from the base of the gates for the surge will be strong in that area. Manning the oars, I position the *Goat* with its stern towards the doors with both boards down, just below the outfall and wait. The surge raises the stern and a free ride down to the fork is had. By the time I turn around and come back the green light is on. In the lock as the water rises I explain about the trip and boat to the keepers, as I do in nearly every lock and meeting on the river. I don't mind they are very helpful.

It's only two miles to Lock #8, the last lift up, it's waiting with open doors. The keepers call ahead when you're in the system and keep track of boats and their speed, don't get to the next lock too soon for they may hold you if you exceed 10mph. Lock #8, being the last lift, brings one to the high point of the Champlain Canal, 139' above sea level. At this high section good winds are expected, but there is none and it's getting hot and dry.

Less than two miles north of Lock #8 the feeder canal comes in from the west, I end up close to the east bank. From here on its downstream to the lake, dropping a total of 44'. The eight miles from Lock #8 to Lock #9 are done at a slower pace with the temperature over 90 degrees. Lock #9 is well kept with picnic areas. I refill water bottles there. It's midmorning so on to Lock #11, nine miles down stream. There is no Lock #10. Maybe I'll stop at Lock #11 at Comstock. I rig the sail with the spars off the mast to form a canopy, it slows the rowing even more.

As we get within two miles of Lock #11 enough canopy problems, down it comes. I put on a long sleeve shirt and wet towels on my legs. A mile from the lock, just south of the Rt. 22 bridge, two fast power boats approach from the south. They slow, I move over some, not much picking up speed to be at max when they pass. As the second boat clears I pull the *Goat* sharply over his wake to get her bow in the hole behind its stern. We don't make it, ending up on the second wave back. Not the best but it works, now if I can keep the *Goat* straight we can surf as long as they stay steady. But the boats speed up, leaving us in turbulence after a few minutes slowing us back to 3.5mph.

We meet in the lock later and have a good laugh after I explain what we were trying to do. We pass down together, they offer a tow, I say no thanks I'm going to rest at the lock in the shade. The lock keepers are the same two from Lock #7. The older man is showing the new one all the locks he will be tending. Water bottles are filled and we talk for half an hour. They ask if I took a tow along the way? No just a short surf ride. I don't think they believe any of it. After a fillup of their cold water I feel good enough to do the last seven miles to Whitehall, Lock #12.

Knowing there are taverns canalside helps make up my mind, and the sun is now far enough over to westward to have tree shade on the west bank. We pass down Lock #12 around 5pm. With the *Goat* tied to the tavern dock, I go inside for cheeseburgers with everything plus a good number of ales. After more than two hours we depart for the New York State boat ramp at South Bay three miles into Lake Champlain. It will be our starting point tomorrow. Another good day except for the heat, haven't been rained on yet, no problems. So far it's been fun. 28 miles today for a total of 63 from the start in Waterford.

Day #4: At 6am the *Goat* heads north out of South Bay with mast on deck. It was taken down last evening to get under the railroad trestle that guards the north end of the bay. The round tapered mast sets through the foredeck into a socket, free to rotate 360 degrees. The sail is rolled around it and lifted in or out as needed. All spars stow inside the boat. Bug repellent is needed to keep the many blackflies away. Oars are back in use with no wind again.

The lake is narrow and swampy for the first 14 miles. On up to Benson's Landing, which we make in 3 hours, the flies keep me moving. I continue to use statute miles as I have marked each one on the chart, and my the mileage was restarted at South Bay. There are number of fishermen to dodge around in this section, most being friendly and interested in our trip. The wind funnels through the high mountains to the west, only to die around the next bend, so the sail was not up for long. The weather radio called for S-SW wind, 10-15 for today.The hills and mountains close on either side will change that a great deal. One mile south of Benson's Landing the lake widens to over 1/2 mile, and a light wind comes from astern. I keep rowing with the sail set out on starboard beam. Good speed is made getting away from the flies. The wind increases, as does the width of the lake, a mile north of Benson's Landing.

With the wind up to 15+ out the SW I'm able to broad reach at 5+mph. Oars are secured alongside the bilge trunks with their blades flat on the hull under the aft deck. Their location makes a good foot brace while sailing seated on the side decks. The temperature is mid 70s and the wind is getting STRONGER! More so above Chipman Point where the hills to the west are lower. I had planned on stopping somewhere in this area, leaving the decision up to the wind and weather. We continue while the wind is willing.

The *Goat* must be making at least 6mph by the size of her wake, I judge this from many hours of watching the 3.5-4mph wake while rowing. I haven't lowered a board yet but may have to for steering is not as good as it should be. Lowering the rudder helps some without increasing drag.

Fort Ticonderoga comes closer and I think of all the people who worked and fought here, with the conditions they lived under. It makes this trip seem easy, help never being far away The course of the marked channel changes from NW to NE at Buoy 39 Marina, the green can out front is now #73. All the buoy numbers were changed at some point through out the lake.

Having worked outdoors most of my life, by instinct I keep going as the weather is with us. On toward Larabee's Point, keeping an eye for the cable ferry that crosses from Vermont which has been the eastern shore since Whitehall. My overall plan is to stay along the Vermont shore on up to the Canadian Border if weather allows. At home my working wife is aware of this, waiting with trailer to come fetch the *Goat* and myself should we come to a halt. I wonder if she still goes to empty parking lots to practice backing up the trailer. Speed is good as the large paper company building shows itself on the New York shore, with dark skies to the west of it.

Checking the chart, I find coves & streams the *Goat* can get into if the thunder that's heard comes to us. Coming abeam and downwind of the paper mill makes me wish to be upwind This wish is repeated often for the next three miles. The dark clouds and thunder come closer from behind the high hills on the west shore, with wind almost stopping at times, then gusting. Sail is rolled & secured as are spars. Auxiliary power of the 7.5' mahogany oars is brought on line, for the mile or so to Monitor Bay Park in Crown Point.

We're in front of the docks in 20 minutes, just now being hit by large scattered raindrops, with lightning now visible. I head into an empty slip where an elderly gent emerges from a old wooden cruiser. Inquiring about the slip, he says take it an come aboard before I get wet. Securing the *Goat*, I accept his invitation, it's past noon, so I bring my lunch. Charlie, now retired, has lived and fished here all his life, and is proud of his well kept boat. Nearly an hour passes, as does the storm, so I thank my host and head for the lake.

There is less wind now, but still southerly. I set the tiller and cleat the sail out to starboard, its the only side its been on. Wind is steady, the skies clear, and we're making 3+mph. I arrange my sleeping mat and cushions in the stern so I can sit back with tiller passing either shoulder making course corrections as needed, the shock cord doing most of the work.

It's an uneventful two hours up to Chimney Pt. Bridge, only passing one fishing boat on the way. It's quiet and scenic, the storm may have sent people home. Just past the bridge we look into Hospital Creek for tonight's stop, it looks buggy. On to D.A.R. State Park, that's very rocky. The *Goat* has performed well and deserves a better landing spot.There's not much daylight left, but the weather is comfortable, wind dropping even more, speed is less than 2mph, back to oar power, raising speed to 3.5+mph.

The lake widens just north of the bridge to 2-3 miles with only a light breeze. Eight miles more to Button Bay S.P. where the thought of a shower draws me. It's hard to overcome the workday life of being someplace at a certain time, what does it matter what time we get there? I slow the rowing, although a 3.5mph pace is fine for all day. The sun is behind the mountain when I pull the *Goat* onto the sand at the campground, where children still are swimming. Two boats are already anchored in the shallow bay. I shower, eat, set the tent on deck and pull the *Goat* out to 3' of water, standing on the anchor to set it.

A check of the chart shows we've come 47 miles since Whitehall, taking about 13 hours, including stops of some 2 hours. I fall asleep quickly at dark.

Day #5: I'm awakened at first light by the rocking of the *Goat* and the sound of an engine. Yes, wind from the S-SW, 15-20. I put the *Goat* on the beach and get back inside where breakfast is had sitting on foredeck while watching the now four cruising boats re-anchor behind the small unamed island in the bay. Button Island, a 1/2 mile west, is much larger, but is guarded by rocks below the surface.

After stowing tent and gear in their waterproof bags tied under the decks, I put on rain gear and life jacket. Rowing close to shore toward the opening between the mainland and Button Island takes us where 2' waves are coming through. I lower both boards for more stability. Centering on the opening before heading west will enable the *Goat* to take the waves head on, which she does well. Progress is slow trying to stay clear of the rocks on either side. We keep on west for almost 1/4 mile before turning north in order to have some leeway. Now with the waves on the port beam, I must keep an eye for them. Nine of ten strokes is with the left arm to keep away from Vermont. Turning west with both hands on the starboard oar gives me ten seconds to set the tiller three knots over to starboard on the cord, rowing can now be almost straight on without going off course.

It takes most of an hour to reach Basin Harbor where the wind is off the port quarter, rigging sail we're up to 5-6mph. The wind comes astern as Diamond Island nears. I must decide before clearing Split Rock whether to take the west shore or stay on the Vermont side. Up north I want to go into Mallet's Bay and The Inland Sea for its better shelter than on the main lake. And I don't want to cross above Split Rock where it widens to 8-10 miles. If the west wind is too much north of the rock, where there are 1000' high cliffs on the west shore, shelter on the east shore no longer exists. We will run east into Converse Bay and hide behind the islands there.

I wonder about being on the main lake, as I have since planning the trip. A number of cruising sailboats are well heeled to the north, this is where most sailing is done, from Westport 9miles back to the south on north to the Canadian border, with depths over 300'. Waves are seen which look to be 3' high from this boat. I will try the Vermont side, heading for Thompson's Pt., which marks the southern end of Converse.

Once fully clear of Split Rock I'm sure of the wave heights and the wind is above 20mph. We are close to a beam reach with one board down, as is the rudder, with speed near seven mph. The boards are faired one side giving lift to windward well at this speed, along with their 2.5' draft. We are able to beat away from shore easily except that it becomes a wet ride if a breaking wave greets us. I learn to go behind them or surf ahead, making well over 7mph doing so. The *Goat* takes a wave on the stern better than its bow with its 45degree rake.

I feel better now but must stay alert for breakers and also the ferry coming out of McNeil Cove, we get a toot as we pass safely in front of it. The next shelter past Sloop Island, now off the port beam, is Meach Island four miles north. We make it there in good shape still surfing and dodging waves. Quaker Smith Pt. is the next haven but we go on to Saxton Pt., a cove one mile north that could be of help to a small boat.The wind is slowly shifting to the NW and getting stronger. Next comes Queneska Island, which we will go behind and take a break.

In its lee I see the conecting ledge between mainland and the island, as we get closer the 8' width of water looks to be 6"-8" deep. Slowly moving foward I raise the board & rudder, moving aft to clear the bow, then when half over the narrow rib of stone I jump foward with only a tick as rudder clears. There is little shelter here, so after a drink and granola bar, we head for Rock Dunder in order to stay well clear of Shelburne Pt. a mile away. Wind and waves have increased, I have to work in order to stay away, once clear there's room for error.

Upon clearing, a bearing is set for the mile long Burlington breakwater 2.5 miles NE. The *Goat* is now in the largest waves yet, the side deck being washed. I dodge as best we can as some breakers get inside. A half-mile outside the breakwater a large power cruiser heads our way. Six people come to the rail to wave and point at the *Goat*.The two story house passes within a hundred feet to port at displacement speed, sending its wake along with the waves. I point towards it and shake my fist, no more waving from the house, now the throttle is cut.

We can't take this on the beam so I bear off to gain speed, sheet in and round up to take the wake head on. If the *Goat* and I swim, the Coast Guard is a mile away and other boats close at hand. The house is now stopped 200 yards away. The *Goat* has enough speed to punch through and over, slapping her bow down on the back side, almost stopped. There's a cheer from the house. We head for the red roofed boathouse in the harbor, I'm hungry. Five ice cream bars and six large chocolate chip cookies fit right in with two milk shakes. It was just before 11:30 when we tied to the dock. I'm not certain when we left Button, 6:am or later, less the hour up to Basin Harbor, leaves 4+hours sailing covering, 25 miles.

At 1pm I start rowing NW towards Colchester Point seven miles into the wind. Progress is slow with two interruptions from boat wakes that throw the oars out of their sockets. It takes 3.5 hours. to reach shelter behind Law Island north of the point. There is no danger of drifting away as the *Goat* sits on white sand a 100' shy of the shore. After resting, I walk her a 1/4 mile north to the trestle which lets small boats into Mallets Bay through the old railroad causeway which forms the western end of the bay.

The main entranc is two miles further north. With mast down, we pass into Mallets. In the shelter of the white rock causeway, sail is rigged to broad reach in the 20+ wind to the narrows that sepaerate the inner and outer bays, 3.5 miles east. The waves are about 3' so breakers must be watched for as the *Goat* would not want one to board. I believe wind is now up to 25. There are sailboats all over both bays where we have learned to sail, but no problems as they have also learned right of way rules. We soon make the neck into the scenic inner bay, continuing east until we're in the lee of the northern fingers of the bay.

Here the sail is safely gybed, it does work on portside! Heading SE through many boats well heeled or moored, the *Goat's* bow is aimed at the sand beach in front of a motel. Board and rudder hoisted 20' off and the *Goat* puts her hull onto the sand. I roll the sail, take a clothing bag to the motel, shower and take a nap, returning after 6pm to secure spars and gear inside the *Goat*, putting the~ cover on for the night. She likes the smooth sand here. Then down the road for a fill of pizza and beer, it's almost dark when I pull the*Goat* higher on the beach.

In the motel room, a look at the chart shows we've made 14 miles since Burlington with 39 being total for the day, 6 or more not being northerly. NOAA out of Burlington predicts the same winds tomorrow, morning will tell.

Day #6: NOAA was right. I don't want to beat or row north and still am tired. I'll hang out, go to the laundromat, clean and repack the *Goat*. That's all finished by noon. After lunch I go down the road to the International Sailing School to visit its owner Robin and her instructors, who have taught Nancy and I sailing over the past four summers. Without this schooling, I would not have ventured out past Split Rock. The office phone rings, it's someone needing crew for their E-Scow, I decline, having had enough the past two days. Down at the school's beach, it's covered with cats and Sunfish. Their teaching boats, 27' Solings, are moored out front. A young man works on his cat's rudders on the beach, I help him the rest of the afternoon and we split a six pack.The only form of compensation I'd accept. After another meal at a local tavern, I turn in early with a south wind forecast for tomorrow.

Day #7: I'm rigging the sail in the dark. NOAA is right again, about 10 knots from the south. We're off at 5am toward the Outer Bay, then turn north for the bridge in the center of Sandbar Causeway. The wind is more SE and stronger away from shore. The causeway is properly named as we are aground on sand 30 yards from the bridge, getting out floats the *Goat*. Letting the sail swing foward, I walk her to and under the span with the 14' peak of sail being cleared by submerging the rail. Into the knee deep water in the lee of the causeway (U.S. Rt. 2) we slowly leave it astern.

Next planned stop is Burton Island S.P. and Marina, 11 miles up the Inland Sea. We're in 15+ SSE wind running and surfing along the western shore. By 8:30 Burton Island is 1.5 miles off the starboard beam, we keep using what NOAA has sent. Passing The Gut off to the west and on toward Knight Island where, on the north end, we make a short stop and go over the chart.

It's 10 miles to the two bridges on the southern end of Missisquoi Bay, then 4 more to the border. With the wind well over 15 & going our way, we surf often to the railroad bridge. It is already swung open leaving a 20' opening on either side of its center pivot. Us-

ing the right side we slip through hoping anyone coming from the other direction will do the same. The Rt. 78 bridge comes quickly with easy clearance, past the bridge the wind is blocked by the roadway and adjoining Hog Island. A mile further we're moving well again. We aim for the red nun thats on a parallel with Province Pt. hanging south off the Canadian mainland. Passing that line, which is a mile north of the 45th Parallel, we're in Canada! Finding a few small fishing boats, we're picking up weeds and black flies in this shallow wildlife refuge.

Having seen enough of Canada, we beat back to the bridges to have lunch at 1pm in their lee. The chart indicates we've covered 34 miles since leaving a warm bed in Mallets Bay. We decide to go back south away from the Missisquoi River delta, home of many flying insects.

Rowing south 3 miles brings us to the northern tip of North Hero Island, which along with South Hero, connected by The Gut drawbridge, divide the Inland Sea from the main lake. West of North Hero lies the Alburg Peninsula and Isle La Motte with narrow passages running N and S between them. The *Goat* is headed down the Alburg Passage with North Hero to port blocking the wind somewhat. Three miles along the Rt. 2 bridge is overhead, four more puts us in shallow Carry Bay. On its eastern side, a small culvert allows us to squeeze back into the Sea. Having decided to camp at Burton Island after all, a course to Knight Island is set more than 2 miles SE. The island helps block fading wind, easing rowing. Then another 2 miles to Woods Island, turning south for the final three to Burton.

Vermont maintains two shoal draft marinas and a campground on the island, which can only be reached by shoal boats. A campsite comes with the slip. After securing the *Goat* & setting up the tent, I shower and eat. Chart & radio time, winds continuing the same tomorrow. 21 more miles since turning back from the border, for a total of 55 today, due too the early start. Though the campground is near full it's quiet as I fall asleep.

Day #8: Strong winds through the trees wake me at 5am. After packing the *Goat*, 1.5' waves driven by 15mph wind can be seen from the marina, which is well protected on its south, as they squeeze between St. Albans Point and the island. Through buoy marked shallows we head south 2 miles across the mouth of St.Albans Bay until we're in the lee of Vermont's 400' high hills. Six miles of rowing puts us off Beans Pt. where sail is hoisted and rain gear put on, it being cool and expecting a wet beat down to Sandbar Bridge.

The *Goat* does not point high, partly because of too much draft in the sail and lee helm I created when placing the bilge boards during construction. It takes three tacks to pass south of Cedar Island, continuing on to the western end of the causeway, then rowing a half mile east in the lee of the road. At the bridge, a walk to knee deep water on its south side and a scooter start with boards half down allows a tack out of the weedy area. Temperature has warmed enough too shed rain gear for the 9-10 miles of beating to the motel in Mallets Bay.

After doing the usual stowing and covering of the*Goat*, I take a shower, visit the tavern to eat. A final chart session shows 30+ miles this last day for a total of 232+ statute miles in sevn days on the water. I know this was an easy sail without tides too contend with and amenities close at hand, along with good temperature conditions. Going through the two valleys with Green Mountains on on the east and New York's Adirondacks to the west being 4 to 5 thousand feet high, it made for a pleasant and very scenic trip. NEVER BEING RAINED ON!!!

Two days later Nancy, with dog and trailer in tow arrives, we spend the rest of the day sailing about Mallets. Having loaded the trusty *Goat* the evening before, we leave early for home the following day, all the way on Rt.U.S. 7 south. While driving I think of the changes to be made on the*Goat* during the coming winter, such as moving the mast aft two feet correcting lee helm and enabling me to tend sail from the cockpit.

As for the trip,I would only change the bugs at both ends of the lake if I could. Despite traveling through populated areas, there was enough space too be by myself at my own pace, while also meeting friendly and helpful water people. It was a Great Mess About!

Two Unlikely Adventures

By Robb White

Just because of coincidental peculiarities of situations, I have resurrected two old, seldom used boats from my vast fleet. The first time was when one of my sons borrowed the 16' lap-strake skiff we usually use to go to the coast to take to the mountains camping with his wife and brand new baby. You know, that's how you are supposed to break in a new baby.

One time (that's one time) I bought a new pickup truck, a diesel, and I asked my friend, the independent diesel truck mechanic (don't ever ask anybody at any dealership anything) what was the best thing to do to break in the engine properly. The reason I bought the thing in the first place was that I was selling a good bit of lumber and hauling it a long way over the road and got tired of my old junkpile breaking down on me all the time and all that cold wind blowing up through the old license tags that I had pop-riveted over the worst of the holes in the floor, and buying all that gas.

I would have bought an old second-hand diesel pickup, but they hadn't been making them long enough for there to be any so I had to go out in the yard and dig up a jar. I had a load to go as soon as I got home with the new truck. Anyway, the mechanic said, "You break them in just like you do a new mule, take them out and work hell out of them all day long so they'll know what they are going to have to do."

That's how you do a new baby, too. If you allow them to lie around too close to the thermostat when they are young, they'll never develop the ability to regulate their body temperature by changing the circulation patterns of their blood and will have to hug the heater all the rest of their lives and might grow up to be helpless ninnies or nincompoops. We used to have to wash our boys in the freezing cold when they were little because there wasn't any point to lighting a fire just to get ready for school. One time, my wife was doing that and when she got ready to dip the rag to wash the other one, it was frozen to the back of the chair she had it hanging on. Both of those boys turned out kind of capable because of such as that.

Damn, I didn't even get started with the boat story before I got sidetracked this time. I guess I am getting worse instead of better. But, the reason I loaned out the boat was because I knew we weren't going to be able to go to the coast because I had over-obligated myself on these non-boat, moneymaking projects (I ain't ever going to do that again). About Thursday, the spring got to be so pretty that I knew I wouldn't be able to concentrate and my time on the job would be wasted and, besides, I might not pay attention and cut myself or something, but the boat was already gone.

"Ha," I said, "I got a dadblamed boat." So I, like a child, dropped all my tools right where they were and went out to the shed and drug out the old take-apart skiff with its old Nissan 8 on its old rusty trailer with the wore-out tires. I think the last time it has gone anywhere was in '97 and the first thing I found out was that the shank of the engine was locked up dead ahead and wouldn't steer. I tried the old grease-gun, heat-gun trick and got a little motion out of it but it was still as stiff as hell. Finally I had to take it apart and ream it out. It wasn't as bad as you would think because I learned a long time ago that it is best when you buy a new outboard motor to take every single machine screw out of everything from the propeller to the shroud and grease it and put it back in. Because of that, the old thing, though corroded to the point of worthlessness, came apart easily.

While I was at it, I put a new water pump impeller in the foot (a lot of OMC parts fit Tohatsu/Nissan). I don't ever put a motor up without taking the float bowl off the carburetor and drying the gas out so it won't gum up the works. Leaving the carburetor dry like that keeps the needle out of the seat so it won't stick or get deformed by sitting closed for years and years, too. It is a simple precaution and paid off handsomely this time. By the time I had replaced the rotten "O" ring in the fuel hose connector so the new gas would quit leaking out, the old thing fired off, first pull, but I didn't have any water out of the pee-hole even though I knew the water pump was fine.

No, I didn't take the foot back off! I knew that a 3/16" bee had stopped the hole with dried mud and I reamed it out with piece of wire. I had pee-hole water then, but nothing out of the idle exhaust hole on the shank of the foot. "Dammit!" I exclaimed and started poking all up in there too, thinking that the 11/16" bees had been at work. I found that I had outfoxed myself because what I pulled out of there was an old, tight-packed, paper towel that I had stuffed in there in anticipation of the cursed bees. With that, it all came back to me and I remembered that I had put a "Q" tip in the pee hole too. I guess a pack rat or one of my grandchildren had pulled that out. I had water and I had propulsion.

All that remained was the old tail light ritual, which, at that, I must digress for only a second: Trailer tail lights will reveal the true nature of a person better than most anything. One of my cousins is emotionally incapable of fixing them. In only minutes he is on brink of hysteria. Me, on the other hand, I can cuss the the damned things for hours. Just a hint to any neophytes that might be among you, if it is acting crazy, like blinking the side lights with the turn signals, it is probably the ground.

Another thing, while I am on this subject: What the hell ails foreigners that, while you can buy a Cadillac so ridiculously configured that it has a GPS that will lead you by the hand on a computerized map of the whole world, or maybe even talk you through the trip ("You are on the wrong road! You are on the wrong road!" the mechanical female might chirp. "You should have turned right back there at the Burger King!") it is only the work of a minute or two to hook up a trailer tail light plug to that Detroit Iron, whereas, even the most rudimentary Japanese pickup truck takes a computer to get brakes, turn signals and tail lights. It reminds me of the old days when some cars were positive ground. Jesus, what was up with that? Some of them even had lug nuts left hand thread on one side of the car and right hand on the other. I think they call that engineering.

Let me get back to the boat before it is too late, which, you know, that saying cames up pretty regular with me. We hooked the old raggedy mess up behind the car and hauled it to the coast lickety split. In the spring, after my wife gets out of school on Friday, it is kind of a rush to make that hundred miles in time to get across to the island before dark. She does not like to run twenty knots in a skiffboat in the pitch dark (well, 14.5 according to the GPS). The old Mercedes sort of likes 68 mph (phooey on Jimmy Carter) and that got us to the ramp barely in time. The sun set behind us half way across. The old house was cold and dark, the electricidad was on the fritz and everything was just right. I don't know about most people but man, I think I was designed to live by the sea. We cooked our supper (he who relies on electricidad is a durn fool) and went to bed.

I am not a good sleeper. I don't know what it is but, even when I was a child, I got up in the middle of the night thinking of something I needed to do. One time, I decided that I needed to carve a model airplane propeller out of a short section of hoe handle. I roughed it out with my sharp pocket knife (the only tool I actually need in this world). I was sanding the little thing with a nail file when a miraculous thought occurred and I got my father's electric drill, chucked a dowel in it, wrapped some sandpaper around that and applied it to the little propeller. Immediately, it wrapped up my skivvy pants so tight that the drill was twisted from my hand, the cord bound the trigger and it locked up. If it hadn't blown the fuse, no telling what all it would have burned up. Before it choked down, it wound up a good bit of me in that knot and it took a lot of untwisting to get me turned back aloose. I sleep like a normal person within hearing range of the ocean. Down here, I sleep pretty good but when I sleep the best is in my little bunk on a tugboat. I like to hear something working hard when I don't have to.

So, I was ready first thing in the morning. The spring harbinger of the return of the delightful mullet is the wonderful osprey and we had seen some of them working the river when we had put in and I knew just where to go to catch some, what they call "Spring Mullet" which are the first arrivals. Some say they come up from South Florida and are not the same species as what they call "Native Mullet" which are bigger, darker and smarter and who show up much later. Spring mullet are a pretty good fish if you haven't had any mullet at all since the fall. They run about 13" long and grow fast during the summer until they are about 15" and pretty fat by fall but they never get to be as dark and massive as the old Natives which can be 20" by November and as big around as the business end of a baseball bat and almost as hard.

The lore of the mullet is not all that perfectly understood. The spring fish mature to spawn by fall just like the natives and there might be some interbreeding but you can still separate them and usually catch a net full of the same kind of fish in a throw. The main difference, except for size and color that I notice is that the spring mullet stay stupid and the old natives get smarter and smarter as the summer goes by. I'll have to write a book about mullet one of these days, but a north Florida native mullet is a smart fish. It doesn't seem likely for a vegetarian (mullet are, except for shrimp-boat decimated sea turtles, the only vertebrate herbivores around here) to acquire such a skill as genius, but the facts are the facts. You know they are the flatout favorite food of anything that can manage to catch them so they have to be smart to get by.

The little spring mullet are the prey of ospreys who are not strong enough to fly off with an old native. Until just recently the old natives were pretty much immune from the hazards of the air and they smugly messed around in water so shallow that they could be easily seen. If you waded too close, they would move back into the marsh grass where they were smart enough to know that a cast net would be propped up off the bottom by the grass and they could get out.

In the last twenty years, the eagles have come back pretty good. Though they are nowhere near as plentiful as ospreys, you see them all the time and sometimes you can see one of them hit one of those old big, dark mullet and snatch her (the females are the biggest and smartest) right out of the water. A big roemullet is a heavy thing though, and sometimes the eagle can't get her all the way out of the water and has to plane her along to the beach where he sits and glares around and casually eats her, starting with the roe.

I am so far away from boats now that I guess I might as well tell this story. Mullet roe is probably the best delicacy in the world. If the Russian aristocracy had discovered it, it would be the caviar. Non-native Americans are, for the most part, unable to, as Charles Darwin put it, "allow their stomachs to soar" enough to get that high, but little babies who have not been retarded by the Froot Loop will tell the truth. If you give a banana sized piece of roe to a child with only two opposing teeth, that child will eat it and defend it as fiercely as any wild animal.

I had an old candid aunt who loved mullet roe beyond all things. One time, she was in especially good luck and the next morning, she felt the need to call her doctor, an old family friend, "Henry," she said, "when I went to the bathroom this morning, all that was in the potty was a layer of clear oil on top of the water." "Better lay off that mullet roe, Pace," was the advice of the sage.

I had seen the osprey and made my plans. But, during the night, I awakened enough to savor the anticipation and even in the house I could feel the feeling of fog. When we got up, it was thick as anything in Maine. As they say in Gulf of Mexico tugboat business, "Hell, you couldn't find the dipstick in the engine room." Nevertheless, we ate a hurried breakfast of Easter eggs and trotted down to try to feel around to find the skiff. I think we smelled it out and that's one of the troubles with a damned two stroke outboard. They stink all the time, can't stand to ride with one of them in the back of a station wagon. It is pitiful that such a stench can be a nostalgic thing to an old man.

So we took off for Bullet Island. It was so foggy that I could barely see the water dripping off my wife's hair and she was sitting on the thwart close enough to touch. My navigation method in thick fog is kind of outlaw. I am afraid of getting run over. In a sailboat, you can usually hear another boat in time to try to figure out where it is, but even an idling outboard is too loud, so I stick to water so shallow that anything that can get up in there with me will be so little that I can run over it.

I don't know anything about the big boats outside of the Gulf of Mexico, but the idea of blowing a horn is so alien to the maritime people of this region that I worked on a tug, off and on, for nearly thirty years and never knew what the horn sounded like. What they will do is run over you in the fog and it is your business to keep that from happening. All navigation signals are transmitted via VHF, "How about that two-whistle side there Cap?" was what I used to say.

If some outlander was to blow the horn to signal his intentions, the signaled boat would reply caustically, "I guess that makes it legal don't it?" and then, later, down the creek he would pass the warning to other commercial traffic, "Y'all better watch out. Here come a Yankee yacht and he got a Kahlenberg on there that'll blow you slap out of the water." Which, I passed by a yard sale one time and there, bigger than life, was a genuine Kahlenberg horn sticking up out of a white plastic bucket. I couldn't resist. Though it didn't have any of the machinery with it, it will damn sure blow you out of the water with the air from a SCUBA tank.

I didn't have my Kahlenberg and my tank though, so we had to skirt down the edge of the beach all the way along the five miles of Dog Island between our little house and the pass. Bullet Island is on the bay side of St. George Island about another five miles along its coast and the pass is some two and a half miles along so that makes the total trip some twelve miles. Bullet Island is the first staging area for the distribution of the newly arrived spring mullet. I guess it is the shallow water around it that warms up and feels good to them or, maybe it is all the little creeks and marshes around there that makes them feel comfortably safe from porpoises (which are determined, deadly predators of mullet) but I think it is tradition.

Anyway, we used to sail there in the old days and it was an all day adventure. The name "Bullet Island" was given to the place by children in our family because it was used during WWII as a strafing practice range for airplanes from Camp Gordon Johnston and Tyndall Field. The bullets (mostly .50 cal Browning machine gun) and shell casings still litter the bottom all around the little island. When we were children, we used to step on the damned, little, rusted into sharpness, steel links that held the cartridges in a chain to feed into the aircraft guns but now, they have all rusted into nothing, thank goodness.

Other artifacts around the place are ancient whiskey bottles, some from during the Civil War when blockade runners used to wait in the shallow water for a fair chance (like a fog) to slip out past the Yanks. I guess they figured that, while they were waiting, they might as well have a little snort or two. You, know, from my fooling around such Civil War sites like that, I have just about come to the conclusion that the Rebs were a hard drinking crew... might have had something to do with losing the war. There are also old bottles from the thirties in the anchorage (called "Pilot Harbor" on the chart) behind Bullet Island. I imagine that the blockade runners of that time did the same thing as those of the Civil War. It is funny how some things never change, even on a sand-bar style barrier island, certainly the most ephemeral of places.

There are also many pot shards and pieces of flint that wash out of the banks of Bullet Island. I know in my soul why they are there and what time of year those pots got busted and those flints got lost... spring mullet time. There is something about Bullet Island and the wonderful mullet and anybody with any sense at all (and ain't too many anymore) knows it. I can imagine the old people camping on the little beach with their dugout canoes pulled up. In the fog, I think I can smell the smoke from their fire and hear them laughing.

(To Be Continued)

A First Cruise On *Pointer*

By Bill Rowe

My brother-in-law, Damian McLaughlin, moved to Cape Cod in 1969 and fell in love with sailing. He purchased the sharpie *Pointer* from Phil Bolger, (see *MAIB* Vol. 20 No. 1, page 26). She came complete with the first ever Gloucester Gull dory. In her then current incarnation she was rigged as a cat yawl. The mainsail was almost an equilateral triangle since she had a 26' boom, a solid wood timber about 5" square. The cabin was even more rudimentary than shown in Phil's drawings, as it contained none of the chairs he shows. The furniture consisted of two halves of a V-berth mattress and a small shelf in the after part of the cabin.

Damian invited me down for a weekend sail. We loaded her up with a cooler filled primarily with Ballentine ale, a couple of sleeping bags, pots and pans and our wives' aunt's antique Coleman stove. We set out from Meganset harbor and had an uneventful sail to Hadley's Harbor. There I was introduced to the sailors' staple meal of corned beef, fried potatoes and onions, washed down with plenty of Ballentine, delicious!

Hadley's was beautiful, with only a couple of other boats anchored there. This was in 1970; last year when we visited Hadley's it was hard to find room to anchor. After a peaceful night I awoke to see flames licking the overhead from the ancient Coleman camp stove. Realization that there was no forward hatch heightened my interest in Damian's efforts to extinguish the fire. He was putting water on it and I was trying to tell him it wouldn't work, but fortunately I was wrong. The fire was put out, the coffee made, and breakfast followed.

After breakfast, the coffee, onions and ale had done their work and a trip to the head was in order. It was a bucket, of course, and its station was the high-sided forward cockpit area abaft the cabin. I had just gotten seated on the bucket when a pleasant, older woman came out on deck of the power cruiser anchored nearby and engaged me in conversation. I found it a challenge to carry on a casual dialog while balanced over the bucket and trying to conceal my activities. However, she soon went below none the wiser.

That day we sailed in light air to Lake Tashmoo on Martha's Vineyard. *Pointer's* shoal draft allowed us easy entrance over the bar, about 2' of depth as I recall. We went ashore, wandered around the Vineyard and had dinner in a small restaurant. The next day we sailed home in very different conditions. There was a strong wind abaft the beam and a goodly chop. As we rolled along, we began to wonder if perhaps *Pointer* was carrying a bit too much sail. This was made clear when the boom caught on a wave top and she broached. She went over at least 70 degrees and we were standing on the backs of the cockpit seats. The boom and most of the mainsail were in the water. I asked if the boat had sufficient ballast to right herself. Damian replied that he hoped so. *Pointer* slowly came upright and we proceeded carefully under a fisherman's reef.

We looked back a bit thereafter and our dinghy, the Gloucester Gull dory, was missing. The sisal painter had parted (don't use sisal rope for anything except decoration). We retraced our course and found her easily. Then came the capture, I was to snag her with the boat hook while Damian handled *Pointer*. We came alongside the dory doing at least 5 knots faster. I snagged a thwart and was given an immediate demonstration of Sir Isaac Newton's three laws of motion.

1: Every body persists in its state of rest or in uniform motion in a straight line unless it is compelled to change that state. In other words the dory wanted to continue on its course. 2: The acceleration of a body is proportional to the forces acting upon it and inversely proportional to its mass. To get the dory to go at *Pointer's* speed and direction required a lot of force. 3: For every action there is an equal and opposite reaction. The dory pulled on me as hard as I pulled on it. I was jerked backward by the force and fell across a partial bulkhead. It knocked the wind out of me and caused intense pain. Damian was yelling, "Don't let go of the dory!" while I moaned in agony. When I came to my senses Damian was steering the boat with one hand and holding on to the dory with the other. I retied the broken painter and we proceeded along.

The rest of the trip was unevenfful with diminishing wind and waves. As we sailed back into Meganset harbor Damian began to sing. "Why are you singing?" I asked.

"I sing when I'm happy and right now I'm really happy," was the response. I understood perfectly. Since then I've been on a lot of cruises, but the first on *Pointer* remains a strong memory. After all, it couldn't have been more fun.

On the Charles In the 1920s

By Barbara Nichols Winslow

(In our April 1st issue Barbara Winslow shared with us her memories of growing up on Boston's Charles River in "The Boathouse". Herewith are Parts 2 and 3 of a brief trip back into those long ago days.)

Canoeing the Charles

My friends Dot and Peg and I began early to cajole Jim Bergen into taking us out on the river. It had to be after he had finished washing his canoes, but we would begin working on him early in order to condition him to the idea. Sometimes Jim would, sometimes he wouldn't. We could never be sure until he walked over to the office where the paddles were kept, and even then he might be just teasing. He'd pull his watch out of his pocket and bend his wrinkled (sun wrinkles, not the wrinkles of age) face down to it and we would wait, hoping.

If he snapped it shut and started for the office, we were sure. If he snapped it shut and started for the boat aisles, well, then we were sure the other way. Jim never wasted conversation. He always wore a white duck gob hat with the brim turned down, and to this day I don't know if Jim had gray hair, blonde hair, black hair or no hair at all. His expression was tantalizingly impossible to interpret. We just had to watch which way he headed.

The great joy of the canoe is its admirable silence in motion, silence that leaves the heron undisturbed in his triangular contemplation, that lets turtles sun like clusters of beads on their log, that lets bluejay and swallow continue about their business, and the muskrat keep his v-trail crossing straight as a die, that barely ripples the water the canoe glides through. The canoeist need have no sense of intrusion And it is the learned discipline and skill of the canoeist makes it so.

I never got to be master of the art that Jim was, but I did pretty well under his tutelage, tutelage that consisted of a combination of show and scorn. And I learned the pleasures of the river as I slipped through the family authority and eased my way from "canoeing with Jim" to "canoeing by myself". Perhaps I picked up that too from Jim, avoid discussions. Quite suddenly a world of exploration opened out for me. I knew the avoidable hazards, and I was learning the sweet delights of decision and going farther and of observing the always-changing, never-changing, river.

Not that I could go very far on our beat of the Charles River. Downstream, below Nuttings, was the dam at Moody Street. Upstream, beyond Norumbega Park, the river narrowed into a choked morass of lily pads and tussocks and waterweeds and mud. Between these limits it was glorious.

Up around the S-bend, past the pumping station, into the wide water before Fox Island and Forest Grove, past the bridge to Purgatory Cove (30 years later, at a reception in Istanbul, I was to meet a man who, when I told him I was from Waltham, Massachusetts, asked wistfully, "and is there still skating in Purgatory Cove?"). A narrower channel, then the great swinging river loop which I could follow or I could take the "cuts", a narrow opening that led into a lagoon with a corresponding cut on the other side out into the mainstream again; then the glimpse of Norumbega Park with its merry-go-rounds and caterpillar ride and miniature zoo to the left and to the right the flock of ducks who learned never to migrate, so well fed were they by pitying mothers and fathers and children, past the Lasell boathouse where the Indian canoes lurked, and then time to turn about and head downstream, perhaps to tie up and read and listen to the water sounds and the wood noises, observe the sunning snapper turtles on their rocks or the waterlilies resting on their pads.

Races and Concerts

I just missed the heyday of the canoe. I think I can remember one of the last regattas or perhaps it was just told to me by a vivid describer, when the river would be almost solidly bridged by canoes, with just enough of a channel left for the canoeists racing hellbent for election with jutting chins and flailing arms driving the paddles deep into the water and thrusting it behind them. There would be short sprints and longer endurance matches that ended far downstream at Nuttings Boathouse and Ballroom. I am sure I remember the big white police boat moving with the throaty gurgle of its engine downstream, keeping pace in case of an upset. There were single paddlers and double paddlers and occasionally a big Indian war canoe would come down from Norumbega, manned by stern and silent paddlers, to join in a race or just show off. There were clappings and shoutings and paddles held straight up in the air in encouragement and salute.

When the races were over, some canoes would start for their various boathouse wharves, others, especially those containing one or two mixed couples, would paddle leisurely upstream to assemble around Fox Island for the evening band concert.

There was then a little wooden-railed and floored and roofed bandstand on Fox Island. Someone would row the chesty uniformed members of the band over to it, and there they would beat and blow out Sousa marches, Strauss waltzes and glittering glowworms while the dark came down, the bandsmen surrounded not by the waters of the Charles so much as by a rising and falling and swaying sea of canoes.

Afficionados or eager suitors had little metal hoops covered with cretonne or plaid gingham to span over the forward section of their canoes, for all the world like beruffled pram bonnets, to keep the sun off, or the rain or the world out. A very cozy and comfortable arrangement, to loll on the matching mattress with canoes to either side and before and aft and everyone listening to the reeds and strings of the band sound over the water. My mother used to cluck in disapproval when a misty Sunday sunrise disclosed here and there among the friendly rushes at the foot of the cemetery two or three canoes, nodding their bonneted and befrilled canopies, that had not bothered to find their ways home at all the night before.

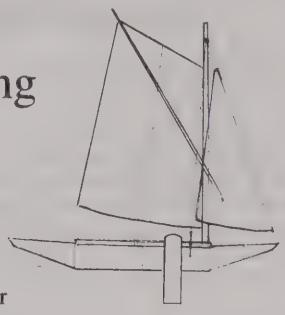
We two girls weren't supposed to guess at what made my mother disapprove. For that matter, I don't think my mother thought my brothers guessed either, for she certainly had no hesitation about sewing my elder brother Hart a canopy out of discarded curtains for his canoe when he asked her to. I have thought since, combining my acquired knowledge of the delicate art of canoe balancing and of the gymnastics of the sexual act, whether my mother really had anything to base her clucking on.

But it must have been peaceful and one was as close to the nature of water, sleeping overnight bedded within the slim ribs of a canoe, as in a sleeping bag on earth. I suspect more comfortable, too, and one's view of the night sky and stars, and of the doubled darkness of trees above and trees mirrored below at the edges of the Charles.

Editor Comments: That heyday of canoeing on Boston's Charles River that Barbara just missed was brought to life in our February 15, 1985 issue when we reprinted a 1957 nostalgia article by Edward Joy, "Canoeing on the Charles...Gone are the Days!" That issue is out of stock but if anyone really would like to read how it was with thousands of canoes recreating on this urban river 100 years ago send me a stamped self-addressed envelope and we'll mail you off a photocopy of that article.

Return of the *Alewife*

Building



By Jeff Hillier

"Pick your weapon." Unexpected words to start a boat building experience last February when twenty "indentured servants" gathered in Essex, Massachusetts for the first of ten Thursday evenings at the boots of several talented boatbuilders.

The "weapon" was a red broad axe that raised specters of hooded executioners carrying out the king's commands in Merry Olde England. And here we were, in merry New England, looking at a 40' log that was said to "contain" a mast for our lighter, a re-creation of the small freight vessel thought to have moved iron ore along the Saugus River in the 1650s for the Saugus Iron Works.

True to the colonial spirit, most work on the boat would be done by hand. Thus, this array of mast-making tools: the fearsome broad axes, draw knives, planes, and sand paper (real sand from Cape Cod Bay, we were told).

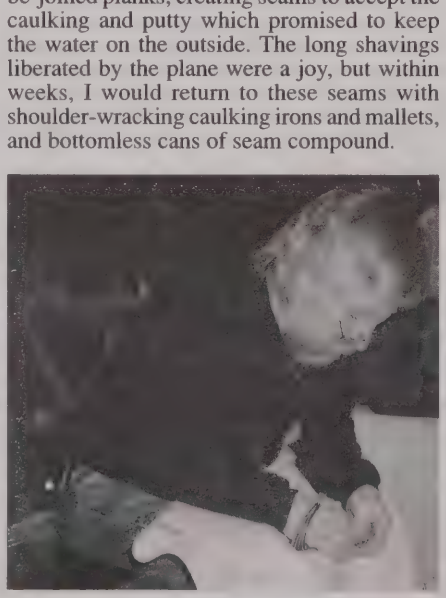
The idea for the boat did not simply hatch one dark and stormy night when a few Essex boatbuilders connected with some of the folks from the Iron Works. For more than 50 years, people at the Iron Works have searched for clues about the orignial boat. They have also been looking for ways to return the river and its extensive marshes to a more pristine state suitable for navigation. In the 1950s Howard Chapelle provided a drawing of a larger boat, a shallop, which he described as "The Great Iron Works Boat". Only recently did the Essex boys take up the challenge. Trying to replicate cutting edge technology of the 17th century, they designed a 26' scow-shaped vessel, sort of a streamlined barge, powered by oars, sails, tides, and prayers.

Like many early colonial ventures, the Saugus foundry was financed by optimistic investors back in the motherland. It was manned by iron workers who, desperate to get a fresh start in the New World, responded to inducements offered on handbills and accepted years of indentured servitude. So how did Charlie Burnham, David Brown, and the other modern day shipbuilders finance their dream? They also advertised, easily luring twenty amateurs who rushed to Essex, arms outstretched, pleading for their credit cards to be rung up.

Bob Cameron welcomed us to the first class, introducing us to the eight or nine professional builders who were volunteering their time to guide us. It was good he did it then, because the "pros" soon became difficult to distinguish from the indentured. Only those who really needed a corporate organizational chart were able to deduce that Charlie was sort of the lead guy, and that David Brown was the ever-so-patient builder for our gracious host, the Waterline Center at the Essex Shipbuilding Museum. But there was zero hierachy among the pros.

Typically, the professsionals seemed so intrigued by the challenges of being true to the times, that they simply melded into our teams of worker bees. The 20 of us were divided into five teams. Teams rotated weekly through the five major areas: one group started as shipbuilders one week, then sailmakers, hardware makers, sparmakers, and then riggers. But the atmosphere remained casual, and no one kept track of who went where; we were free to watch and take part in anything we wanted. For the most part, the teams did focus on their assignments each week, but much time was spent rubbernecking everything else going on throughout the shop. The inexhaustable supply of Oreos (no, not double stuffers) proved an additional distraction.

Shipbuilder: In our first assignment, our team tried to impersonate ship's carpenters. All of the planks had been roughly finished for us by a sawmill. Even so, we were soon to experience the joys of a real pit saw, made by one of the pros. Colonial Shipbuilding Tip #1: A pit man soon develops a new understanding of the well-worn phrase, "Old Facefull". My first task was to plane the edges of soon-to-be-joined planks, creating seams to accept the caulking and putty which promised to keep the water on the outside. The long shavings liberated by the plane were a joy, but within weeks, I would return to these seams with shoulder-wracking caulking irons and mallets, and bottomless cans of seam compound.



Sailmaker: Josh Bevins, our resident sailmaker, soon proved true to his ominous words of the first night: "...you're gonna sew 'til your hands are bloodied!" Romantic visions of expansive sail lofts with skilled workers pushing precise stitches into billows of canvas soon gave way to the realities of permanently puncturing my my landlubber hands. After two hours of agony, I had only 18" of shoddy stitches (which I carefully hid under folds of the sail). Yes, I did allow myself a two Oreo break. We used a modern day fabric, Oceanus, which captures much of the look and feel of old cotton sails. Tip #2: When a sailmaker offers you a needle and sewing palm, come down with appendicitis real fast.

Hardware Maker: Now I know why the shipbuilders killed all of the elm trees in New England. It may be the wood of choice for deadeyes, but working with it leaves a lot of dull tools and weary woodworkers. But those deadeyes do stand up to formidable forces generated between shrouds and chain plates. The oak we used for the cleats and blocks was more forgiving, and it allowed us the pleasure of creating some snazzy "hardware" for the boat.

On two evenings we were able to watch a skilled smithy from the Iron Works make iron implements on a small forge. Curtis deftly showed us how to alternately heat and pound a piece of iron into a chainplate of the style that could have been used on the original Saugus vessel. Suddenly aware of the derivation of "going at it hammer and tong", most of us were quite content to just watch this one.

Sparmaker: Week #4. It was our turn at that mast. Although I had taken some whacks earlier with the broad ax, I must admit to relief that most of that work had been completed. Having been squared and trued, it was now an eight-sided masterpiece . So we only had to go to sixteens and then round (well, sort of). The guys scheduled for the next week would become intimately acquainted with those long "Cape Cod" sanding belts used to strop the mast really round.

Rigger: The quietest part of the shop was the area for worming, parceling, and serving the hefty lines which would become shrouds supporting the mast. Resident rigger Stanley Dulong talked softly, showing ancient techniques for protecting rope from wear and rot. In his hands the serving mallet possessed the strength and accuracy of a machine. And his flawless splices should be framed and exhibited in an art gallery. Stanley augmented his demonstrations with banter about the "real" days of rigging.

Over the course of ten weeks, teams cycled twice through each area. With time, experience, and a little confidence, most of us jumped ship from our assigned areas with increasing frequency, didn't want to miss a thing! The caulking mallet and its associated implements drew me in, but the next morning my shoulder was screaming, "Bursitis, you fool!" Tip #3: You will recover faster from a serious run in with poison ivy than a stint at the wrong end of a caulking mallet.

After several weeks, the professionals (volunteers, remember) began sneaking back to the Waterline Center nights and weekends. They claimed to be pushed by a deadline to have the boat ready for a big tide in late April, but we suspected they were just having a great time working on the boat, and with each other. One Thursday we came back to find the second spar had been squared up. Suspiciously, there were no large ax chips or shavings, only mounds of uniform little chips that looked like they had been chewed out by a chainsaw, a Gov. Bradford Model #1, no doubt. Tip #4: Surer than nicotine, your power tool addiction will creep back and take over your life.

Inexorably, Launch Day approached. Full moons and flood tides seem unaware that man has conquered the earth. The days just before that Saturday morning, April 27, became increasingly frenetic. Seams to be filled. Exteriors to be coated with a pine tar solution. Sails were finished only 12 hours ahead of time, yet a certain sailmaker clucked, "What've you guys been doin'... not finished yet!?" Others defended with, "It would't be a real launch if the paint were dry!" Another tried to change the subject, "By the way, does this ship have a name?"

The Saturday morning tide rose quietly along the Essex River, but the boatyard brimmed with a growing crowd of spectators trying to stay out of the way of the shipbuilders (the real ones, and those of us pretending, and after ten weeks we indentured put forth a camouflage of swagger and banter).

The nameboard was in place: *Alewife*. Poised at the top of the ramp. Mast raised. Those glorious folds of Oceanus trying to get free. Stanley needed only one swing with the champagne. As slick as her namesake, *Alewife* headed for the water. Harold Burnham's cannon roared, the crowd cheered, little boys (and a big one too) fell in, but not a drop of the Essex River dared enter our proud vessel.

Watching vessel and crew heading down river and down wind, shore-bound skeptics grabbed cell phones, seeking a powered launch to retrieve her. Fear not; snappy seamanship prevailed. Despite the long oars and the sweep snagging amidst the check-by-jowl crowd on board, *Alewife* managed a stately return against wind and tide.

After this abbreviated sea trial, finishing details are making *Alewife* ready for the voyage past Gloucester and along the southern shore of Cape Ann to the mouth of the Saugus River. The mast will bow for the post-colonial bridges, and *Alewife* will squeeze her way up the silted river to a new home at the Saugus Iron Works. Tip #5: Sooner or later, an alewife always returns to its river.

Along with seventeen other men and women, I am most grateful for this opportunity to work with the pros, learn so many traditional boatbuilding skills, and feel a part of the wonderful spirit at the Waterline Center of the Essex Shipbuilding Museum. Thank you, Charlie Burnham and your many boatbuilding friends.

More importantly, the Iron Works will finally have a vessel to show visitors how our ancestors annually moved 250 tons of ore and iron between Saugus and Boston. And the dream is that the Massachusetts State Highway Department, conservation folks, and even the U.S. Coast Guard will now look more seriously at the wear, tear, and neglect of the Saugus River.

When you are north of Boston, stop in to see the Iron Works and *Alewife*. You will, no doubt, be amazed by 17th Century iron making technology. The Saugus Iron Works is open almost every day of the year. Also, don't miss the Essex Historical Society & Shipbuilding Museum just a few miles further up the road.

Launching

Photos by Bob Hicks

There were a few last minute details to be dealt with but *Alewife* took to the water as scheduled, with most of the building team gathered for the occasion.

Deliverance

Photos by Peter Moore & Bob Hicks

The "voyage" from the Essex River to the Saugus River was made on the ramp truck of the Gaybrook Garage. It's a long way around by sea from Essex, a trip the old iron work's scows never had reason to make.

Headed off upriver on the coming tide in a cold northeast rain, the 20mph wind on the nose at the start required oarpower.

The Lincoln Ave. bridge was the first obstacle to river navigation, nice timing was needed to catch the tide with just enough water to float off the bottom but not so much as to get stuck under the bridge. There's a big water main hanging below the span partway through also. ·

Safely through.

Poling in the shallows of the several oxbows where the tidal river winds its way through the marshes.

An abandoned railway trestle had just enough width for *Alewife*, but it took some gymnastics by one crew member to hook a line onto the trestle to help pull her through over the shallow bottom.

"There's a big tree down upstream," said one local viewing the adventure. But *Alewife* was successfully poled past its outer limbs.

Just upstream of the Hamilton St. bridge the remains of an old stone dam required exquisite timing and some engineering to surmount. Sufficient headroom under the bridge and sufficient water over the dam came into balance only briefly, and the final topping of the dam was achieved with a rockaby effort, everyone to the stern to get up onto the dam, then to the bow to get over.

Alewife's rig was up after clearing the Hamilton St. bridge and a subsequent overhead sewer pipe on pilings, and here she is as close as she can get to the old docksite in the foreground. The turning basin was dredged in the 1950s when the site was restored, but has filled in since with this silted up marsh.

Coming up through the final narrows, threading her rig through the overhanging trees.

Journey's end, *Alewife* arrives at the head of navigation, beyond that footbridge the Saugus River comes down over a long rocky rapids.

Now she belongs to the National Park Service, *Alewife* moored just below the footbridge where she can be viewed by park visitors.

Looking Back...

By Bill Gamblin

Jake's Dream: The Built-In Depth Sounder

The best kind of depth sounder that I've ever encountered was one in a fellow called Jake. That sounds a bit odd, so perhaps I'd better explain. Depth sounders were just a dream in 1942 and if we could have perfected Jake's system we could have cleaned up! But, to get to the story, which is true, Jake came to me one day in March and said, "Bill I've iust bought the *Dovekie*, but she's at Fredericton and I want to sail her down at the club for the summer. I don't know the river, you do, so how about coming along for the trip."

Now it's about 70 miles from Fredericton to the Royal Kennebecasis Yacht Club, along the Saint John River, which has been called "The Rhine of America". Actually it's better for sailing than the Rhine because of a peculiarity where the river enters the Bay of Fundy. Even though it is wide and over 400 miles long and has a number of navigable tributaries, it still empties through a rocky gorge only a few hundred feet wide. This is the Reversing Falls, which modifies the 30' to 35' tide in the bay, to a gentle 1-1/2' tide in the lower part of the river. This peters out to nothing at all about 70 miles upriver. It is quite surprising for somebody on Washademoak Lake, which is a tributary of the river, to find that the lake has a tide, and a current which reverses! .

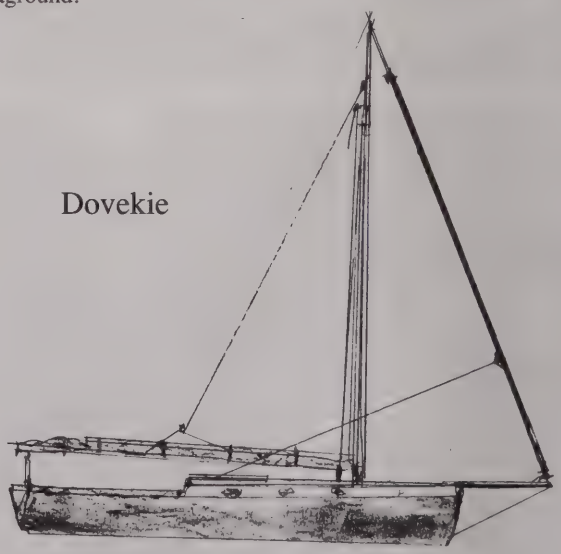
Well, I agreed to accompany Jake on the trip. The only problem was that the river was in "freshet", meaning that it was the spring runoff time, and water levels would be 15' to 25' above summer heights. This would prove to be a problem, but only in the area around Gagetown. The valley there was low lying, and there were numerous islands, which, with the high water, could only be told from the channels between them by the rows of trees that edged every island. As long as you kept the trees on the proper side you wouldn't go aground.

Dovekie was moored in a small creek across from Fredericton and we spent a few weekends getting her rig and galley ready for the trip. She had one piece of gear that I hadn't sailed with, a Wykeham-Martin jib roller furler. These days a jib without a furler is as unusual as *Dovekie* was in those days. Finally we were ready and got under way. The first stretch was straight upwind and we made about 16 miles before it became so dark we had to anchor.

Next morning we got underway in about 10 knots the nose. Around noon we reached Gagetown Cut, between an island and the mainland. All that could be seen of the island was a row of trees. We were on the starboard tack heading away from the mainland when I asked, "Jake, how far is it to that line of trees?"

Jake turned white and yelled, "Come about, we're going aground!". I threw the helm over and then asked Jake what was wrong. He said that the previous night he had a dream in which I had asked him, "Jake, how far is it to that line of trees?" and we went aground. Well, I looked at him and he looked at me, and we went aground in the channel!

As I said this is true. I just wish there was a way of controlling Jake's dreams. I don't think it would sell well if it always ended up with the boat aground!



Dovekie

CLC Sport Tandem

10th Member of the Chesapeake Kayak Family

Our Chesapeake Sport Tandem double sea kayak is ideal for light touring, exercise, or racing. While it shares the Chesapeake Double's ease of construction and sturdy, fiberglass-sheathed hull, the boat is low and fine-lined, with a handsome sheerline and plenty of volume in the bow for lifting over waves at speed. This new boat has less overall volume than the Chesapeake Double for those who don't need to pack mountains of wilderness gear. The cockpits, grouped close amidships, keep the crew weight centered. Freeboard is lower so crosswinds have less grip on the boat. The hull weight is around 65lbs, less than many plastic or fiberglass single kayaks!

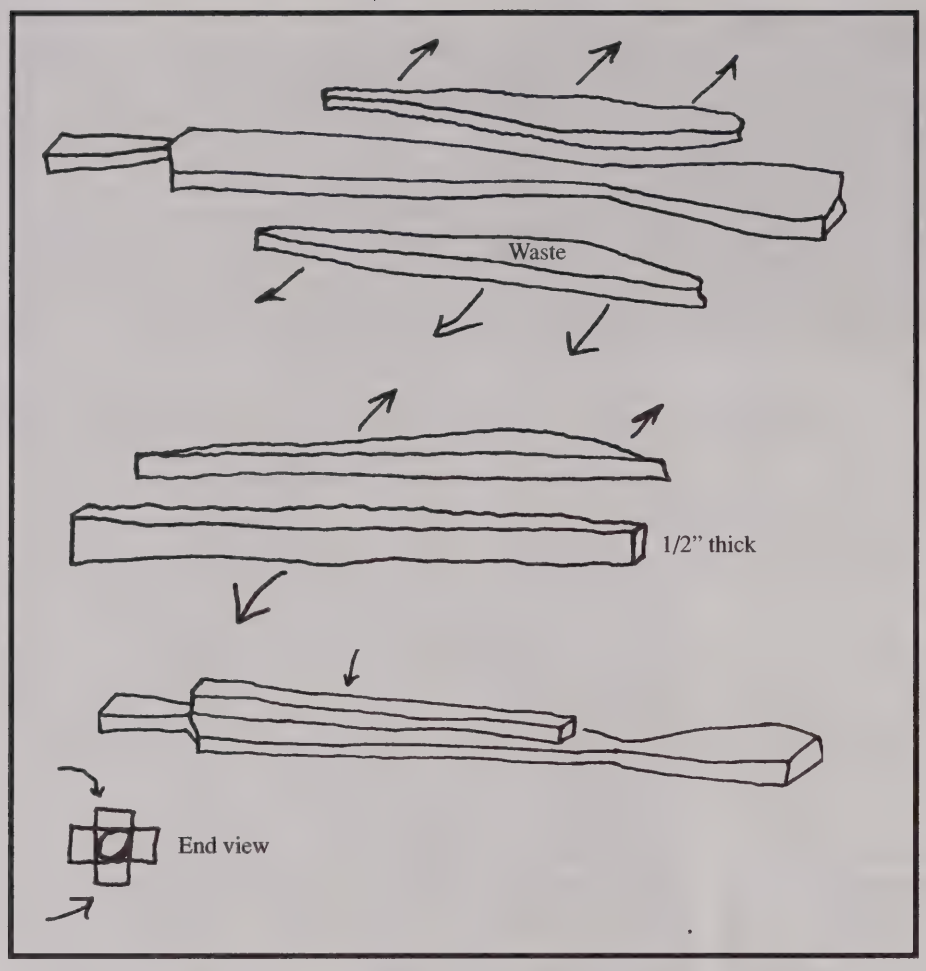
Like all of CLC's new designs, a prototype circulated for a year among local paddling clubs for trial and comment. Ellis Andersen & Ron Vennell paddled the prototype at last fall's 2001 Broad Creek Blast in Laurel, Delaware, part of the Delmarva Paddlers Racing Circuit. Though it was their first time in the boat, they took first place against a competitive field.

Hard chines permit a narrow waterline for speed with excellent secondary stability. A coordinated team can lean the Sport Tandem to carve turns. Designer John Harris remarks, "The concept is very much like our North Bay Greenland-style hull, lengthened, with the same swoopy lines. Unlike the North Bay, however, the stern has been tweaked to take a standard Feathercraft K2 rudder." A rudder is a good idea on a tandem of this length and straight-line tracking ability.

At 21'8" overall and 22" beam, the Sport Tandem is racy but still retains room for gear. The cockpit openings are 31" by 17", as in l Chesapeake touring boats. It weighs (built of okoume mahogany) 65 lbs. Adults of average size will find the seating comfortable. It is a perfect fit for experienced paddlers desiring a high-performance tandem kayak.

The kit includes plans, instruction manual, pre-cut parts, hatches and bulkheads, full deck rigging, Keepers™ adjustable footbraces, epoxy kit, fiberglass for hull and deck, foam seats and backbands.

Chesapeake Light Craft, LLC, 1805 George Ave., Annapolis, MD 21401, (410) 267-0137 9am-5pm EST weekdays, 10am-2pm EST Saturday.



Two by Foars

By Mike Moore

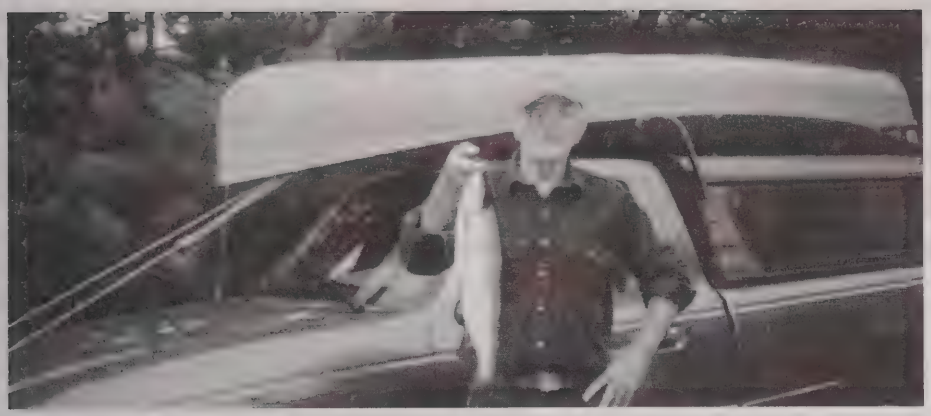
After cutting out some blanks for a new pair of oars I began to wonder how narrow an oar blade could be made and still be effective. The 5" wide blade oars I was working on required the use of a 6" wide board and left two large chunks of waste wood from the throat of the oar to the handle. In *Skiffs and Schooners*, Pete Culler makes the statement that an oar blade should never be wider than 4" in order to minimize outboard weight. This is in opposition to a lot of modern designs and models, most of which seem to run wider than 4".

I set out to determine if a pair of good oars could be made from 2"x4" lumber from the local lumberyard. I was allowed to pick through the stack and select a pair of 8' Douglas Fir boards of equal density and straight grain. I used Culler's dimensions as a guide to dimension a 7-3/4' oar, with a blade width of 3-1/4" throat width of 1", and upper loom diameter of 1-7/8".

I used the construction technique outlined in *Woodenboat*, Number 127, "Making Oars and Leathers" by Eric Dow. The blanks were cut out according to a pattern, then the dimensioned edge of the waste pieces were used as a guide for cutting out two 1/2" thick strips about 2-1/2' long. The strips were smoothed with a hand plane and glued to the face of the oar blank at the top of the loom in order to give enough thickness for the required 1-7/8" diameter. The oars were then shaped using the spar-making method of 4-8-16 sides to round, and some hollow was put into the blade with molding plane.

I've found that painting or varnishing an oar can be awkward and time consuming. I've had good results by simply oiling the oars with a linseed oil-turps mixture applied with a rag. The oil dries quickly and after three coats the oar is pretty much water repellent, the oil should be reapplied regularly, but it is a pretty quick operation. I do take care not to leave the oars to bake in the sun and store them indoors.

Performance-wise these oars seem fine for recreational use, they are lightweight and with a slightly higher stroke rate can move a boat as fast as the wider bladed oars, with less wasted wood.



Low Tech Fishing 101

By Art Brunt

I live in Wolfeboro, New Hampshire, which is located in the heart of the Lakes Region. I am approximately five minutes from a launch site on Lake Winnipesaukee, New Hampshire's largest lake. The lake has landlocked salmon, rainbow trout, lake trout, large and small mouth bass, plus a few other varieties. The season here begins on April 1, but ice-out usually doesn't occur until around April 20. Then the annual rite of spring fishing takes over.

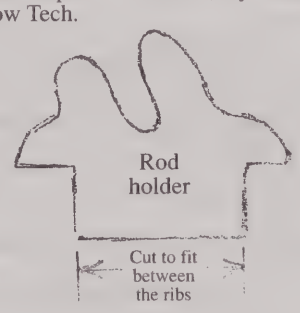
My transporter is a Ford Ranger pickup with an aluminum cap. The cap has a tubular rack mounted to it with a rubber hose taped on to protect the boats. I drilled the front bumper and installed two eye bolts to give a "Y" fastening for the bow line. On the rear, I put another eye bolt through the trailer hitch point. This, plus the two rack ropes, make the boat very secure. The cap can also serve as sleeping quarters during foul weather, in place of my tent.

My canoe is a 14' stripper of my own design. First, the ribs were formed over the mold. Then the tongue and grooved cedar strips were glued with gorilla glue to the ribs. It is a single seater with a removeable carrying yoke that attaches with two wing nuts. The outside of the hull has a layer of 6oz fiberglass cloth bonded with MAS epoxy resin. The inside was coated with resin and then the whole rig got a couple of coats of varnish. The boat weighs 40lbs. I can manage loading and unloading quite easily by myself. The seat is woven with rawhide as I have broken more cane seats than I care to remember. If I stay out long enough, I tend to develop the "waffle butt" syndrome.

My Northwoods paddles were carved from ash using plans from *WoodenBoat* magazine (Nov/Dec 1985, #67). The article was written by Rick Waters and it featured Alexandra Conover demonstrating the process step by step. The handles of the paddles are oiled with linseed oil and the blades are varnished. They have a nice flex to them and paddling with them is a real joy.

My pack basket was made from ash strips. It was my first attempt at basket weaving and all went well. The harness is nylon webbing. The basket carries my tackle box, rain jacket, water bottle, bug repellent, plastic bag for fish and a compressed air boat horn for self defense. There are many fast boats out on the lake and following a near collision, my kids presented me with the air horn.

My rod holders are very simple, but effective. They are cut from 1/4" plywood and will work with any canoe that has open gunnels (see drawing). My longtime motto is, "Keep it simple!" As a result, my kids call me Mr. Low Tech.



My two fishing rods are a little embarrassing to look at, but they do the job. One is a badly neglected purple fly rod that I bought from a student of mine in the mid-fifties for $3. I can faintly read Action Rod on it. The wrappings on the guides have been repaired with various colors of thread. The rod is badly faded and worn.

The reel on this one is a Pfleuger Sal Trout that I bought at an auction. This matches the rod perfectly, as it is also pretty beat-up. This reel has no drag, so when the fish run, they really take off. I had a guy tell me that this reel is valuable as an antique. I find that hard to believe. The other rod is a Zebco I won as a door prize at a Salmon Unlimited meeting. It's in a little better shape than the purple rod. The reel on this one is an old Penn level wind reel with a drag. This was a gift from a friend at work. On this one, I run a Cabela's 10 lb. test wire line with a woven covering that changes colors every 10yds. As you are beginning to see, I'm not talking about a big investment in tackle here.

Since the water is very cold, I dress in layers according to the outside temp. First, I don a layer of polypro. Next comes a wet suit top, topped with a flannel shirt. Then, possibly, I put on a sweater or windbreaker, or both. Some mornings the temps will be in the 20s and I'm plenty warm dressed this way. The most important thing is to wear a good quality PFD at all times. I also have a whistle tied to my PFD, just in case I need to attract attention.

It amuses me to see the guys in the big boats dressed in down jackets, hoods, gloves; the whole nine yards. They'll look over and see this old guy paddling along in just a flannel shirt. Because sound carries so well over water, I often hear some pretty funny remarks above the noise of their engines!

Now that I've covered the equipment, let's go fishing. You do remember the purple rod, right? One thing I neglected to mention, was that despite being a fly rod it is rigged with 6lb. test monofilament line. The mono line doesn't leave a trail in the water like a fly line does. With this setup, the fly rides very close to the surface. When a salmon hits this, it is in the air "like right now". This reel has no drag, so I wrap an elastic twice around the rod handle and once to the reel handle. When a fish strikes, the rubber band helps to set the hook. Then I release the reel handle and let the fish run. It's a little on the primitive side, but it works well. The other rod has the wire line and with this I can vary the depth of the fly or lure in an attempt to locate where the fish are holding.

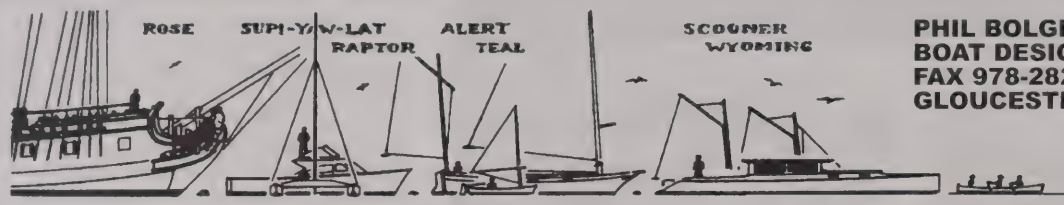
I admit to being a distracted canoe paddler as I enjoy the mountain views and wildlife. I also keep track of the other boats in the area. As a result, I use a little trick to alert myself to a strike. I always allow about 6" of space between the rod handle and the pack basket. When I hear the rod handle sliding over the floor of the boat, I know I've either had a strike or snagged the bottom. It gets my attention!

Once I catch one I'm going to keep, I check to see what size bait fish they are foraging on. I try to match my fly size accordingly. I find that marabou type flies have good action when paddling. When I'm trailing two lines, I let out the mono first and then the wire. Otherwise, the wire will sink quickly and snag the bottom.

Weather is also an important factor. If I get out before sunrise in foggy or cloudy conditions, flat water is okay. Once the sun hits the surface, I usually need a chop to be successful. When the wind is blowing, I pay close attention to the direction to avoid tangling the lines when playing a fish. If a fish hits when I'm paddling into the wind, I turn the boat sideways and let it drift. This helps to keep a taut line.

What really "makes my day" is catching one in view of a powerboat that is equipped with all of the electronic gear: Fish finders that tell the depth and size of the fish, downriggers that allow them to drop their lures to the exact depth and side boards that run the lines out about 30' from the sides of the boat, plus a host of other electronic goodies. Some of these rigs look like Russian trawlers coming down the lake.

Now, that is the basic text of Low Tech Fishing 101. Happy paddling and good luck! By the way, you don't have to be a kid to fish like this. I'm an old buzzard who will turn 73 shortly.



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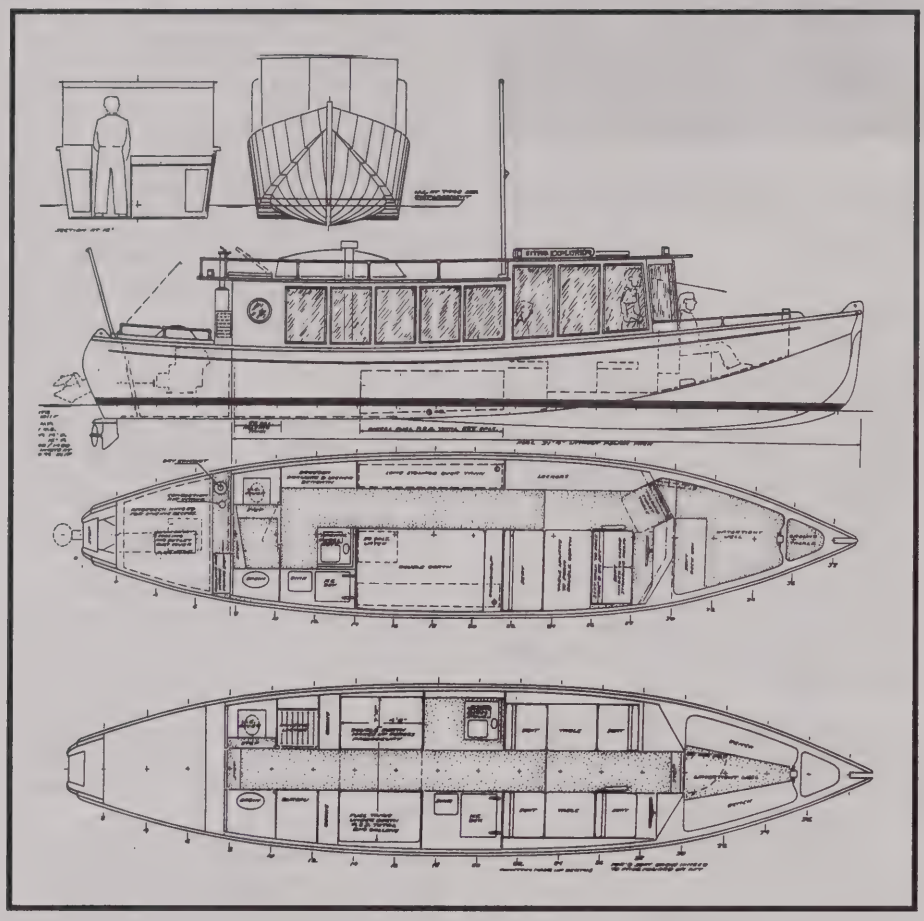

Bolger on Design

Sitka Explorer

(Preliminary Study)

First off, Sitka Explorer is just a concept-study for a longer-range coastal, riverine and lake cruiser for two, well-developed, but not yet buildable! Any takers to help subsidize the completion of plans?

Second, she nearly offers Tahiti's (#653) footprint while using the satisfactory Topaz (#650) lower planing speed hull geometry, 20+knots, which shines in its low-wake characteristic at single digit speeds.

Third, instead of using diesel power, she would be fine for displacement speed using a 25-50hp large prop 4-stroke outboard, with more power, inboard or outboard, capable of planing into the high teens.

Discussing Her Shape: Sitka Explorer's fine bowed, simple to build, and stout hull concept, is based on a long lineage of sharpie developments. "Slenderness" begins at well above 4:1 length to beam ratio. Topaz confirmed that such a shape is efficient indeed planing in the low-twenties, seeming overpowered with 75hp outboard. For two-some longer range live aboard coastal cruising, shooting for fuel efficient slenderness means shallow length for a given load/interior requirement.

Sitka Explorer's approx. 37' of WL moves the theoretical hull speed up to just above 8kts. In a hull of her slender and shallow proportions, 7'2" WL beam, and midsection-draft of around 8" fully loaded, with a length-to-beam ratio of over 5.1:1, these theoretical numbers though begin to lose some of their hard meaning. While more or less binding for short and deeper boats, slender and shallow hulls can bend the rule quite a bit.

As a phenomenon not at all unknown historically, current arbitrarily defined preferences have long overshadowed the opportunities that slender and shallow hulls would offer in a comparatively light payload duty role. A smidgen of owners of unmodified power-sharpie Tennessee class boats of about 30' x 6' claimed 10mph with 10hp (large 11-3/4" prop) four-stroke. In calm sea-condition, clients of similarly-proportioned but ballasted/deeper 30' sailing sharpies still reported full hull-speed even with two-stroke/small (8-1/2-9") prop of 10hp.

While as slender overall, Sitka Explorer offers more actual WL per given hull length and much less rocker aft than traditional sharpie proportions would allow. If these reports can be relied upon, power requirements to do full hull speed of around 8kts in Sitka Explorer should be in the 15-20hp range, if this power is efficiently transmitted through a larger yet prop, i.e. the proposed 15"/16"

Preliminary Specifications

Length 38'11"
Waterline length 37'1"
Beam overall 8'1"
Beam at waterline 7'2"
Draft at cutwater 1'1"
Draft at 16' midsection 8"
Draft over lower unit 2'3"
Complete weight wet (no crew/food) ca. 54001bs
Max. est. payload (people, food, etc.) ca. 20001bs
Typical two-some cruising displ. (w/50% fuel) at ca. l0" fwd/6" aft hull-draft ca. 5500lbs
Maximum endurance displ. for two w/full fuel & 10001bs for crew and food ca. 6400lbs
Absolute maximum endurance displacement at load waterline ca. 74001bs
Diesel 30hp at 3000rpm
Optional 50hp large prop 4-stroke outboard
Maximum fuel load 220 gals
Preliminary water tankage (to be refilled underway in part by rain-water) 50 gals
Preliminary holding tank capacity 50 gals
Preliminary battery capacity at 12v 350ah
Range w/ full fuel at 5mpg ca. 1100nm
Range w/full fuel at 10mpg ca. 2200nm (not improbable at most effcient hull-speed) or 275 hrs/11+ days running continuously around the clock [in arctic summer])

three-bladed operating at a zero static shaft angle and rather moderate slip. To go faster yet, we expect her slender and shallow shape not to have to get "over da hump"". Rather, with her nose rising somewhat and her straight bottom stern more or less staying where it is at rest, she might accelerate to where her 30 torquey horses could achieve perhaps 10kts. How she will actually perform at full power remains to be shown, due to this being a somewhat experimental, though not wild, concept. Obviously with full expedition load, full hull speed of around 8kts would be it.

Traditionally, power sharpies suffer from various degrees of pounding in head seas, less an issue in riverine and other inland waters. This typically depends on the lengths and height of waves encountered. And with simple, light, slender and shallow shapes such as 30' Tennesse, 39' Dakota, 51' Wyom1ng, or the mighty 63' Illinois, wave bridging ability clearly increases with length, and thus the reduction of drama running through choppier conditions.

The advantages of these shapes is clear, though mostly overlooked by the mainstream. There is ultra-simple construction with mostly straight cuts, frequently at 90 degree, for rapid framing and joinerwork, the option of easily achieving massively strong bottom and topsides structures by just stacking the ply, super-efficient running i.e., low-hp requirements for the bang, maximum stability per given beam, maximum useful interior floor space, and more.

Sitka Explorer reflects many of these positive attributes, but without having to accept most of the bad ones. Several recent designs feature the same strong bottom construction of Bolger Boxes but with the bow pulled up far above the waterline and a variable deadrise cutwater of developable shape attached to its underside. The principle here is to combine the solid stability of a flat-bottom amidships and aft with the slicing characteristics of a sharp vee-shaped bow. Rather than having to build a full-hull-length vee bottom just to get a sharper bow, which frequently is still too blunt on more beam than our Slicer design , we just add fairing nose to the underside of a stout bottom! In Sitka Explorer's case, her bow is both wholesome to look at, as fine as we need it for rule-bending performance, and structurally/construction effortwise remarkably easy to fashion out of untortured plywood.

And we never break through this bottom, making thus the nose a potentially sacrificial buffer if one runs into floating logs, onto uncharted rocks or just gets caught by navigational errors; the hull thus should not take on any water, irrespective of how massively that vee has been chewed up. When hauled out, you cut away the debris back to the bottom proper, and attach a new construction of the old vee-nose for ready and undramatic recommissioning of the boat.

Thus the vee-nose consists only of the extension of her stem into a sub keel, two developed 1/4" plywood panels draped over one or two frames and glassed heavily for abrasion and impact resistance, and probably a mild lamination in the vee-edge to apply a metal edge band. This vee-nose assembly is attached for ease of fit and work to the bottom when the bottom is still upside down but has already been completely sealed and sheathed, to keep the rot out of it, perhaps unavoidable even with the nose volume fully foamed. Actual attachment of the vee-nose would just be glass-tape and epoxy.

The bottom-proper of Sitka Explorer would thus be of two 50/50 staggered (no-scarph) layers of 1/2" ply for l" thickness, finished both sides, including adding the nose, before placing it right side up, with the bow resting on the shop floor and the rear midsections blocked up level to account for the 4" difference. On this plumbed and trued platform you erect the various bulkheads and frame on its upper side. Due to the straight/flat midsection from bow to stern, not many, if any, temporary molds or other support structures should be necessary to proceed rapidly. Even after you've finally hung the complete topsides panel, her stern will still allow more or less level ground access to her interior for non-acrobatic progress on the joinerwork, plumbing, and electrics.

Her mild flare is a mix of light aesthetics and the interest to keep waves running aft along her body from climbing/spraying any higher than necessary. That protruding bottom at the nose should act very well as a spray rail, without tacking one on later, usually unsightly and indicative of something predictable having been overlooked during the design-phase (we'll see how much we're overlooking!).

In general, her bulkheads/frames and built in joinerwork complement each other structurally, to allow a stiff envelope without much dedicated effort spent on adding structural supports. Thus between her 1" bottom, her 1/2" Payson jointed topsides and house structure (2" foam between 1/4"ply in roof), Sitka Explorer's structure should be rapid to assemble, stout to handle serious cruising, forgiving enough (under the bow) to shrug off nasty surprises or blunders at the wheel, and yield an efficient shape with few gentle curves.

Part of the overall coherence of simplicity, shape and easy structure is her unexpected stern shape. Aesthetically, this plywood stern offers tremendous visual opportunities from most if not all angles over any square transom. It complements the bow, and it largely hides the excrescence of the outdrive or optional outboard, either up or down. Thus you have an almost pointed stern and still enjoy the virtues of out-drive/outboard propulsion largely without lumpy disruption of her lines. To us, that stern makes her shape visually coherent through and through.

Functionally, it offers WL length without the wetted surface, weight, necessary construction effort, and dynamic bulk (in following seas for instance) of a traditional transom. It combines her narrow fore and aft powerplant/drive assembly on a dead straight weight-carrying bottom with a gently curved topsides above a sharp-edged chine. The water flow along this stern/aft-midsection should be efficient both at displacement speeds and the intermediary stage before full planing, which would happen only far beyond her target-speed of 10kts. In this rule bending hull, as indicated by her truly shallow draft, she needs no further water plane area available from a square transom approach. Finally, maneuvering in close quarters will be easier without that transom corner always sticking out.

Yes, there is a net loss in deck space. But we figured that her 15' long house roof would allow sunbathing (though not by 23 litigious lawyers assembling all on the same side to ogle that mermaid) and if push comes to shove, you can strap a bicycle next to the dinghy(ies), store long boathooks and spars for dinghy sailing rigs, all without disrupting the wheelhouse hatch, nameboard, searchlight, photovoltaic panels etc. No flying bridge though, please!

Finally, a word on her overall length. You can comfortably build a 39' boat in a 35' shop by building just the forward 31'4" first, complete, fully finished, then move it out, either just 8' through the door, or completely, to then build her stern-section/power-pack separately to be attached to the hull in less than a day outside when the time comes! Since her 1" bottom is dead straight aft, you should be able to build a well-fitting add-on stern without too much geometric grief. With straight bottom and 90 degree de facto transoms aligning and eventually connecting both sections, plus some care, alignment outside later still does not seem a particularly scary proposal. Actual union of the pieces would be bolts, and epoxy, then slurry and then tape with a perfect finish. Or you could just bolt them together with good ring gaskets around the underwater bolts to keep the seep out.

Her Interior Layout: The drawings are quite clear about her accommodations. We came up with at least three rather different versions, but found only two worthwhile representing here. Asymmetries of one of them are quite significant on the plans, should on that stiff bottom not be too pronounced, as the as yet unplaced batteries for instance could trim her athwartships to make up for all that starboard joinerwork; also notice the portside holding tank. At any rate, after some back and forth we concluded that on her narrow beam, not much moving weight, people, diminishing provisions, and water weight migration into the holding-tank, is ever far enough from her centerline to really give you annoying trim problems port to starboard.

The location of her fuel tanks, a comparatively significant variable weight overall of 1,500lbs, allows decent trim fore and aft, irrespective of particular fuel load, with little noise from transverse sloshing due to the tall and narrow shape. The engine/outdrive weight, plus the completely separate starter batteries in the engine compartment, will make her trim bow up when at rest without crew sitting forward. But she should not trim head down with four adults sitting in the wheelhouse, and with just one or two crew a light noseup trim is only beneficial to dry slicing action at the bow. Indeed, apart from her ground tackle in its bow compartment, and a few fenders and lines in that bow cockpit/seatbox, there is little weight to keep that bow from performing well and predictably in rougher waters. In the above-mentioned Two-some cruising mode on half fuel load she will show additional inches of bottom paint all around.

Her interior volume offers lots of elbow room and stowage volume. In keeping with our Glass House concept, she offers near 360 degree view from the helm. Only the enclosed permanent head seems to interrupt the field of view, but its walls could be made transparent with Lexan and inside curtains on either all three forward and aft facing panels or just with a glass in the door only cum curtain assembly. With just the dinghy perhaps in the way, if you don't tow it during lower speed sightseeing, standing anywhere forward gives immediate full circle perspectives even with a solid head wall aft.

Incidentally, the toilet is a version of our

"Don't look down" outhouse type, in which a well gasketed and reliably doggable lid keeps an otherwise plain holding tank with toilet seat from misbehaving out there; an automatic or manual switch turns on a small 4" computer fan ($5 surplus) that extracts the gases from the inside of the tank via a PVC pipe up to the roof to a 90degree and 45degree 4" PVC swan neck, to keep any smell from filling first the head and then the boat. A big Edson pump will allow pumping things out offshore or the pumpout station's/boat's trunk is plain stuck through the top opening for evacuation. Ergo no flushing water, no fancy hardware, no valves, no underwater through hulls, lowest plumbing efforts conceivable, greatest reliability, and that big 2" Edson pump is good for other things.

Otherwise her plumbing is supposed to be hand pumped to header tank type with gravity feed for minimal plumbing effort and maximum reliability, a Pacer l qt/stroke does wonders and offers a minor workout. With a sight glass, or a somewhat transparent tank, use can be carefully gauged for sensible consumption efforts, unlike the all you can pump electrical approach.

Her Power Pack: Finally, her powerplant is an advanced 30hp air oil cooled 2-cylinder industrial duty super simple FL1011F series diesel made by Deutz. Since the mid-eighties they have built several hundred thousand of this engine family, powering everything from NATO field equipment to civilian pumps, generators, construction-equipment, etc., etc. They use an oversized oil pump to direct 1/3rd of its flow to the typical bearing, underside of pistons etc. for lubrication and on the hot spot cooling, while the other 2/3rds are used, like regular water/glycol based coolant, as coolant circulating throughout the engine, with the extracted heat dumped through an engine mounted oversized oilcooler. Thus there is no freshwater pump, no saltwater pump, no strainers, impellers, heat exchangers, hoses, clamps etc. to buy, install, see corrode and age rapidly in salt air.

This is as reliable as anything ever can be in engine land, short of a turbine, of course. There is just an oil thermostat that controls the flow, and that single belt that drive the fan, incorporated into which physically is a 60amp alternator. Unlike any Lycoming or Continental, amongst the last larger displacement air cooled engines in use, there is no cold shock possible. With an optional 24v starter system, these units get going at down to -30 degrees, not an issue for you, unless you choose to live aboard her up on land in Alaska and that cold snap gets you.

For true powerhouse capability, this engine can readily swing an additional monster 290amp brushless industrial duty alternator to produce up to 3.4kw of electricity. But a stock automotive alternator (non marine since on diesel engine) of 140amps for just $200 might allow rapid battery charging on a distant anchorage, or running big searchlights to find them logs in your path on that urgent night-passage with Mark Twain's Log in your hand.

Thus this engine is not an aftermarket/makeshift marinization job, like most marine pleasure boat diesels in the market. In fact, you would install the Deutz completely unmodified. Period. Warranty intact, with just the fuel to connect, and the starter-leads to hook up. We would go fancy and get super soft engine mounts and the small Aquadrive CVjoints to make it as quiet and smooth as possible!

The drawings of that stern engine compartment show a straightforward dry exhaust, a baffled, in the lee of the house, cooling air intake box to starboard, and the ducted hot air exhaust being dumped through the transom right above the outdrive. Its combustion air intake is up under the house overhang for high and dry pickup, and thus the option in case of utter catastrophic collision amidships for instance to keep the engine running with her awash inside a foot or two, until her natural buoyancy keeps her from going down any further. Without any engine vital electrics involved, this is a nice bit of worst-case insurance allowing her run semi-submarining to be beached or even brought in over longer distance to be repaired, or cannibalized by you.

Compared with the outboard option, vital reliability is clearly superior, no waterpumps to fail, ignition components to go south, water intakes to get clogged, or internal corrosion from saltwater dependence. Consider that most commercial fishing vessels are single screw, and with clean fuel doable on board with generous filtering plumbing, reliability is clearly a multiple of that of outboards.

And if you want, and we would offer this anyway, there could be a quick mount bracket inside her stern on which to quickly hang a 6hp outboard of any make to run either to a settlement, or at least into the known paths of periodic traffic; two 6gal tanks of gasoline could sit in boxes on top of the engine room hatch for self draining storage.

The other end of her propulsion package is that Cat-Drive which comes in lengths of up to 48" from input to output shafts. Sitka Explorer needs just the 800mm unit, which will support the 30hp diesel torque quite well with its low-geared 15" or 16" prop. The point about using these in this country largely unknown units is that they offer complete retraction of the drive cum prop out of the water for absolutely minimal corrosion potential, an option not available from any American maker. The 60 degree total swing port to starboard is not great, but acceptable for an IO-drive, and, with the bite of 15"/16"prop, precise and predictable maneuvering should be possible. According to the factory(!), when at rest in order to minimize corrosion the drive leg can readily be raised manually, i.e. via rope actuated release of the lock and vertical rope pull on the unit, crude, effective, cheap, and reliable! A field kit is supposed to allow unscheduled maintenance and basic repairs without major machine shop support. And buying extra spares will give you that easy feeling on longer more remote stretches of water.

Incidentally, "no heat" on any outboard means that its combustion related heat emissions are dumped and lost, whereas the Deutz unit allows routinely the use of a fan powered oil radiator inside the boat cabin to use its heat to warm up the boat, like the heater-core in your car, saving fuel on, or replacing, running any dedicated cabin heater!

Finally, and finally indeed, a diesel engine allows one fuel operation on board Sitka Explorer. Between engine heat when running, and stove heat when resting, she can be kept warm at any time, and for quite some time with that large fuel capacity, trading warmth for some range. Apparently there is a growing number of reasonably responsive diesel based cooking devices available now, allowing cooking without heating the boat all the time.

An alternative way of cooking, not inconceivable on a powerboat which has all the charging power you could ever burn, is to use in strong but limited bursts electric power, i.e. a microwave for a few minutes at a time to get that can of stew heated up or just that cup of cocoa in the morning, or even a single hotplate for 10min. max. pancakes or stir-fry. In a displacement-speed hull, doubling the battery capacity to allow somewhat more indulgent electric cooking and baking is quite possible. We would try to do without the concerns and plumbing issues of propane on board and experiment with a mix of diesel power, diesel heat, and electric cooking.

This preliminary study has lingered a few years after the initial client got spectacularly unreasonable and we parted company, we have one every year or two, perhaps enough for a juicy book someday. As mentioned, Topaz has since shown how these simple shapes work without much fuss up into the low twenties, and with some luck a dramatically accelerated schedule may show us Tahiti running, albeit uncompleted, some time this summer.

Sitka Explorer should fit many would be power cruising couples' needs, at a fraction of the running expense the typical trawleryacht would impose, with a likely multiplication of these powerboats' reliability. She'll be thermally sound and highly sinking resistant by the time we're through with the plans. And with her maximum beam of 8'1" she may readily cross piggy-back the continent, or the Atlantic, where a 40' container would otherwise ride on the road, the rail, and nestled atop a pile of containers on a fast cargo ship.

Of course, and with great care(, and a manic eye on the weather report and iceberg sightings, hopping from coastal and island port to port, topping off her fuel, she might be as safe as many sailing craft crossing the Atlantic on the northernmost route, while smoothing along faster than most of them at 7-8kts, depending on the the distance to the next diesel can. Coastal and extensive autonomous riverine and large lake exploration, though, would be her most suitable range of itinerary, with her minimal draft for any diesel powered liveaboard cruiser, and stout field repairable structure.

Finally, there could be a third layout that has not yet found its way into these drawings...

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'92 Friendship Sloop, 22', 3' draft, 9' beam. Blt by Harold Burnham, Essex, MA. Oak frames & floors, pine planking, bronze fastened, full keel, epoxy over plywood deck, cuddy w/accommodations for 2, new Oceanus sails (gaff rigged main and self-tending jib), spruce spars, new standing & running rigging, '00 6hp OB. A joy to sail, simple, beautiful, strong & dry. Have sailed her from Gloucester to Maine many times and am looking for an owner who will enjoy her, as we're trading up to a bigger boat. Exc cond. $14,500.
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ALAN CADY, Edgewater, MD, (410) 268-1808. (6)

14' Playbuoy Pontoon Boat, '98. Mercury 15hp electric start OB, Playbuoy factory trlr. Exc cond, stored in garage. $4,800. **14' Hunter 140 Sailboat,** '00, Like new, fast boat. North sails, roller furling jib, tiller ext, wind indicator. W/Northeaster galv trlr. $3,400.
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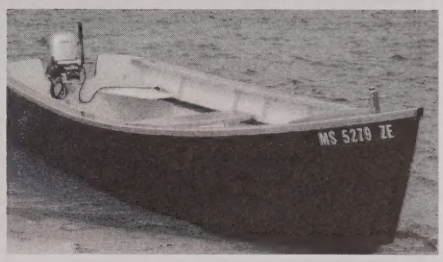

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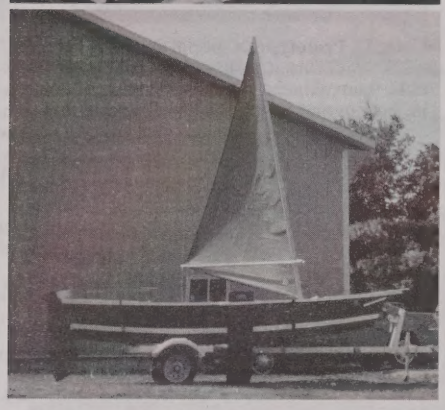

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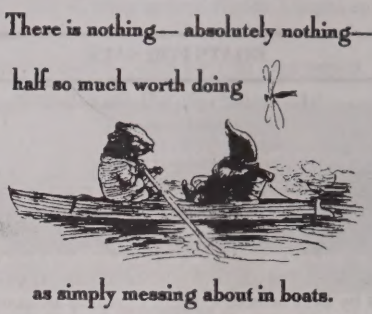

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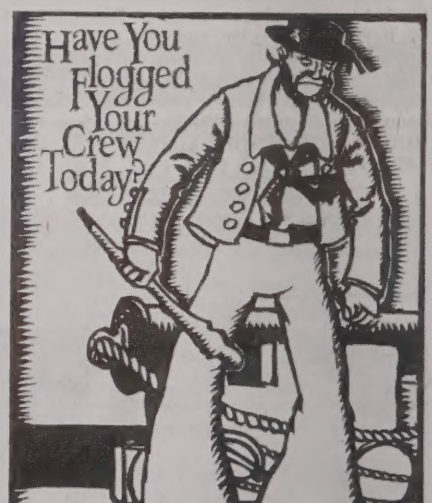

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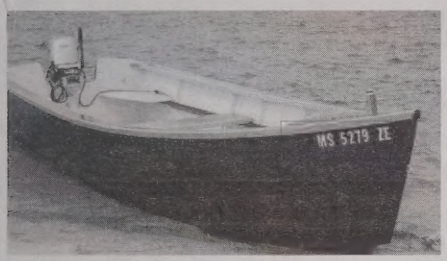

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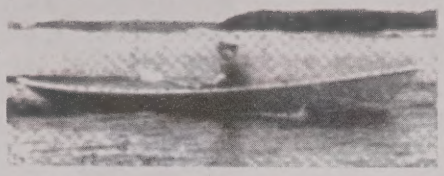

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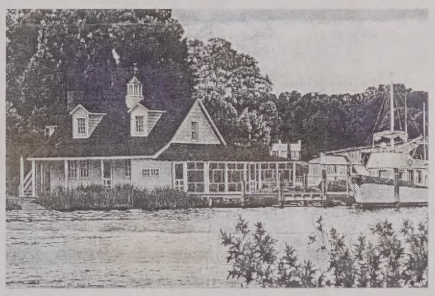

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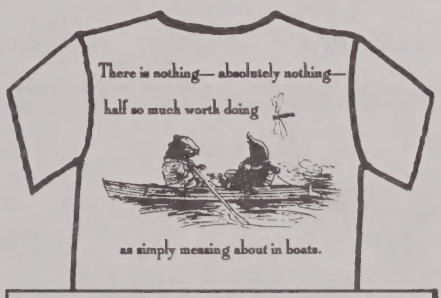

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